

# ONKYO SERVICE MANUAL

## AUDIO VIDEO CONTROL TUNER AMPLIFIER MODEL TX-SV636



USA / Worldwide models

European model

### Black model

BMDN	120V AC, 60Hz
BMP	230V AC, 50Hz
BMW	120V or 220V ~ 230V AC, 50/60Hz

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  $\Delta$  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

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**ONKYO**<sup>®</sup>  
**AUDIO COMPONENTS**

## SPECIFICATIONS

### AMPLIFIER SECTION

<b>Power Output</b>	
Stereo mode	
Front Main L/R channels:	100 watts per channel, min. RMS at 8 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion.
Continuous Power output:	2 × 120 watts at 8ohms (DIN)
Surround mode and Multi source mode	
Front Main L/R and Center channels:	85 W + 85 W + 85 W (1 kHz, 0.08%, 8 ohms)
Rear channels (Rear only driven):	30 W + 30 W (1 kHz, 0.8 %, 8 ohms)
Remote channels:	85 W + 85 W (1 kHz, 0.1%, 8 ohms)
Total Harmonic Distortion:	0.08% at rated power (Front)
IM Distortion:	0.08% at rated power (Front)
Damping Factor:	60 at 8 ohms (Front)
<b>Input Sensitivity and Impedance</b>	
Phono:	2.5 mV/50 kohms
CD/Tape Play:	150 mV/50 kohms
<b>Output level and impedance</b>	
Tape Rec:	150 mV/2.2 kohms
Pre out:	1 V/ 2.2 kohms
Phono Overload:	120 mV RMS at 1 kHz, 0.5% T.H.D.
Frequency Response:	20 Hz to 30 kHz, ±1 dB
RIAA Deviation:	20 Hz to 20 kHz, ±0.8 dB
<b>Tone Control</b>	
Bass:	±10 dB at 100 Hz
Treble:	±10 dB at 10 kHz
<b>Signal to Noise Ratio</b>	
Phono:	80 dB (IHF A, 5 mV input)
CD/Tape:	100 dB (IHF A)
Muting:	-∞ dB

### VIDEO SECTION

Signal sensitivity and impedance:	1 Vp-p, 75 ohms (VDP/VCR input, output)
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### TUNER SECTION

#### FM

Tuning Range:	87.5 — 108.0 MHz (50 kHz steps)
<b>Usable Sensitivity</b>	
Mono:	11.2 dBf, 1.0 μV (75 ohms), IHF 0.9 μV (26 dB S/N, 40 kHz Div.) 75 ohms, DIN
Stereo:	17.2 dBf, 2.0 μV (75 ohms), IHF 23 μV (46 dB S/N, 40kHz Div.) 75 ohms, DIN
<b>50dB Quieting Sensitivity</b>	
Mono:	17.2 dBf, 2.0 μV (75 ohms)
Stereo:	37.2 dBf, 20 μV (75 ohms)
Capture Ratio:	1.5 dB
<b>Image Rejection Ratio</b>	
U.S.A. & Canadian models:	40 dB
Other area models:	85 dB
IF Rejection Ratio:	90 dB
<b>Signal-to-Noise Ratio</b>	
Mono:	73 dB
Stereo:	67 dB
Alternate Channel Attenuation:	55 dB
AM Suppression Ratio:	50 dB
<b>Total Harmonic Distortion</b>	
Mono:	0.15%
Stereo:	0.25%
Frequency Response:	30 Hz — 15 kHz, ±1.5 dB
Stereo Separation:	45 dB at 1 kHz 30 dB at 100 Hz — 10 kHz

#### AM

<b>Tuning Range</b>	
U.S.A. & Canadian models:	530 — 1,710 kHz (10 kHz steps)
European & Australian models:	522 — 1,611 kHz (9 kHz steps)
Worldwide models:	531 — 1,602 kHz (9 kHz steps), 530 — 1,710 kHz (10 kHz steps)
Usable Sensitivity:	30 μV
Image Rejection Ratio:	40 dB
IF Rejection Ratio:	40 dB
Signal-to-Noise Ratio:	40 dB
Total Harmonic Distortion:	0.7%

### GENERAL

<b>Power Supply:</b>	
U.S.A. & Canadian models:	AC 120 V, 60 Hz
European & Australian models:	AC 230 V, 50 Hz
Worldwide models:	AC 220-230 V and 120 V switchable, 50/60 Hz
<b>Power Consumption</b>	
U.S.A & Canadian models:	4.3 A
Other area models:	410 W
Dimensions (W × H × D):	455 × 170 × 389 mm 17-15/16" × 6-11/16" × 15-5/16"
Weight:	13.0 kg (28.7 lbs)


### REMOTE CONTROLLER


U.S.A. & Canadian models:	RC-P101S
Other area models:	RC-P201S
Transmitter:	Infrared
Signal range:	Approx. 5 meters, 16 ft.
Power supply:	Two "AA" batteries (1.5V × 2)

Specifications and features are subject to change without notice.

## SERVICE PROCEDURES

### 1. Replacing the fuses

 This symbol located near the fuse indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

 Ce symbole indique que le fusible utilise est a rapide. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce dernier est indique la qu le present symbol est appose.

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252166Y	6.3A-UL/T-237, Primary <D/W>
F902	252076	3.15A-TSC, Primary <P/W>
F903	252075	2.5A-SE-EAK, Primary <P>

NOTE: <D> :120V model only  
<P> :230V model only  
<W> :Worldwide model only

### 2. To Initialize the unit

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical source results in accident which causes the specified operations and functions to operate abnormally.

To perform a result, please follow the procedure below.

- Press and hold down the VIDEO-1 button, then press the POWER button.
- After "clear" is displayed, the preset memory and each mode stored in the memory, such as surround, are initialized and will return to the factory settings.

### 3. Safety-check out

(Only U.S.A. model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and the screw on the back panel.

Specifications: 3.3 Mohm $\pm$ 10% at 500V.

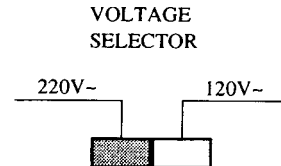
### 4. Change of voltage

Worldwide models are equipment with a voltage selector to conform with local power supplies. This switch is located on the back panel.

Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on.

This switch is set to 220V at the factory. Voltage is changed by sliding the groove in the switch with the screwdriver to the right

or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on.



### 5. Memory preservation

This unit does not require memory preservation batteries.

A built-in memory power back-up system preserves contents of the memory during power failures and even when the unit is unplugged.

The unit must be plugged in and the power switch turned on and off once in order to charge the back-up system. Note that since this is not a permanent memory, the power switch must be turned on and off a few times each month the keep the back-up system operative.

The period of the time during which memory contents are preserved after power has last been turned off varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of 3 to 4 weeks (a minimum of 2 weeks) after the last time power has been turned off. This period is shorted when the unit is exposed to very high humidity or used in an area with an extremely humid climate.

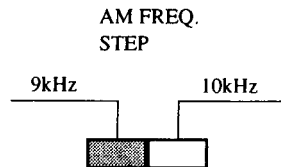
### 6. Setting the tuning step frequency

Worldwide models are equipped with a step band selector switch. This switch is located on the back panel. This switch is set to 9 kHz at the factory, but may have to be reset to 10 kHz depending on the area where the unit is used.

AM band step

Europe: 9 kHz

U.S.A.: 10 kHz

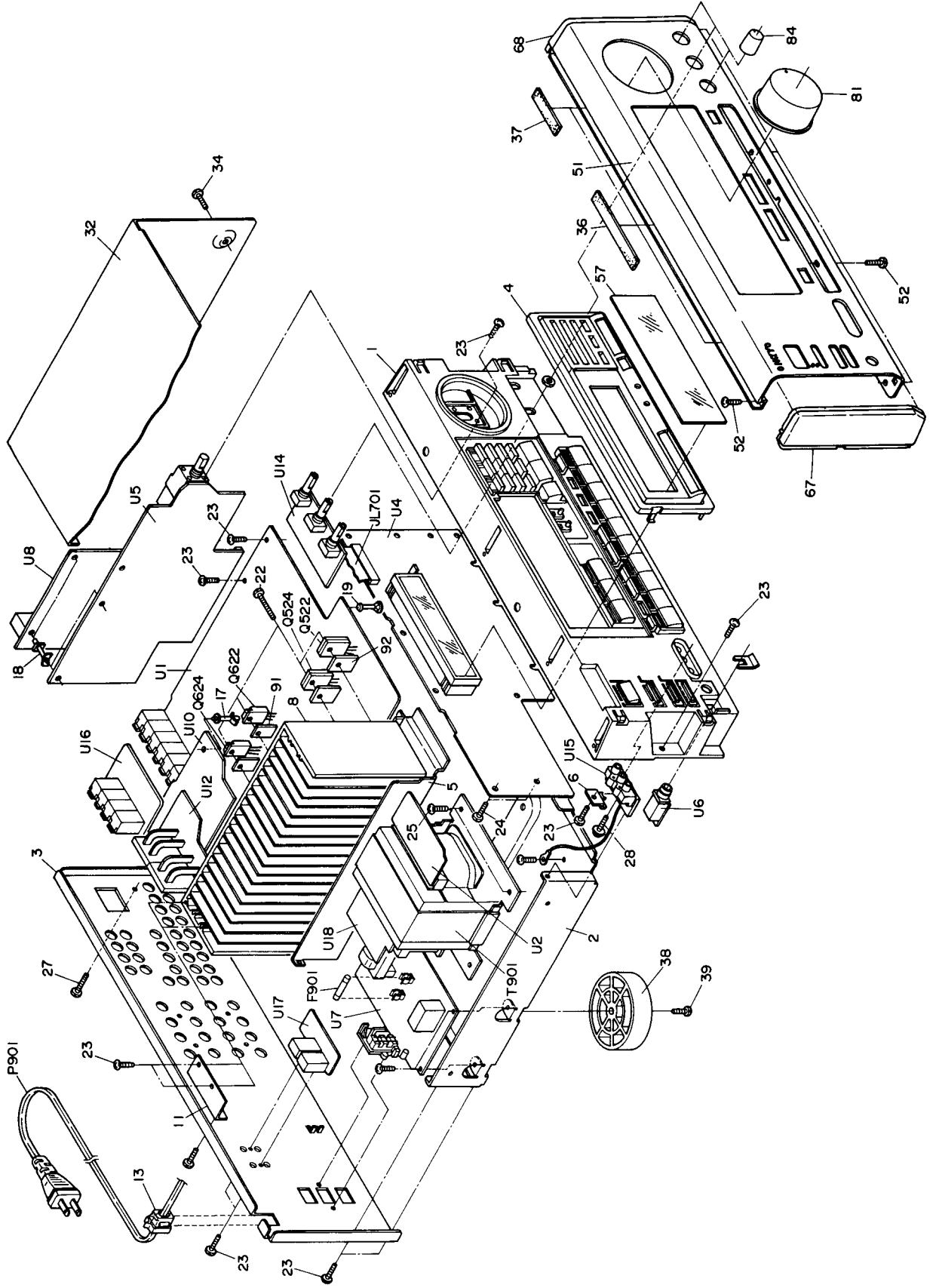


### 7. Changing the band step

With the exception of the worldwide models, a tuning step selector switch is not provided. When you change the band step, change the parts as shown below.

	To 10 kHz	To 9 kHz
R764	1.8 kohm	3 kohm

**EXPLODED VIEW**  
120V / Worldwide models



# PARTS LIST

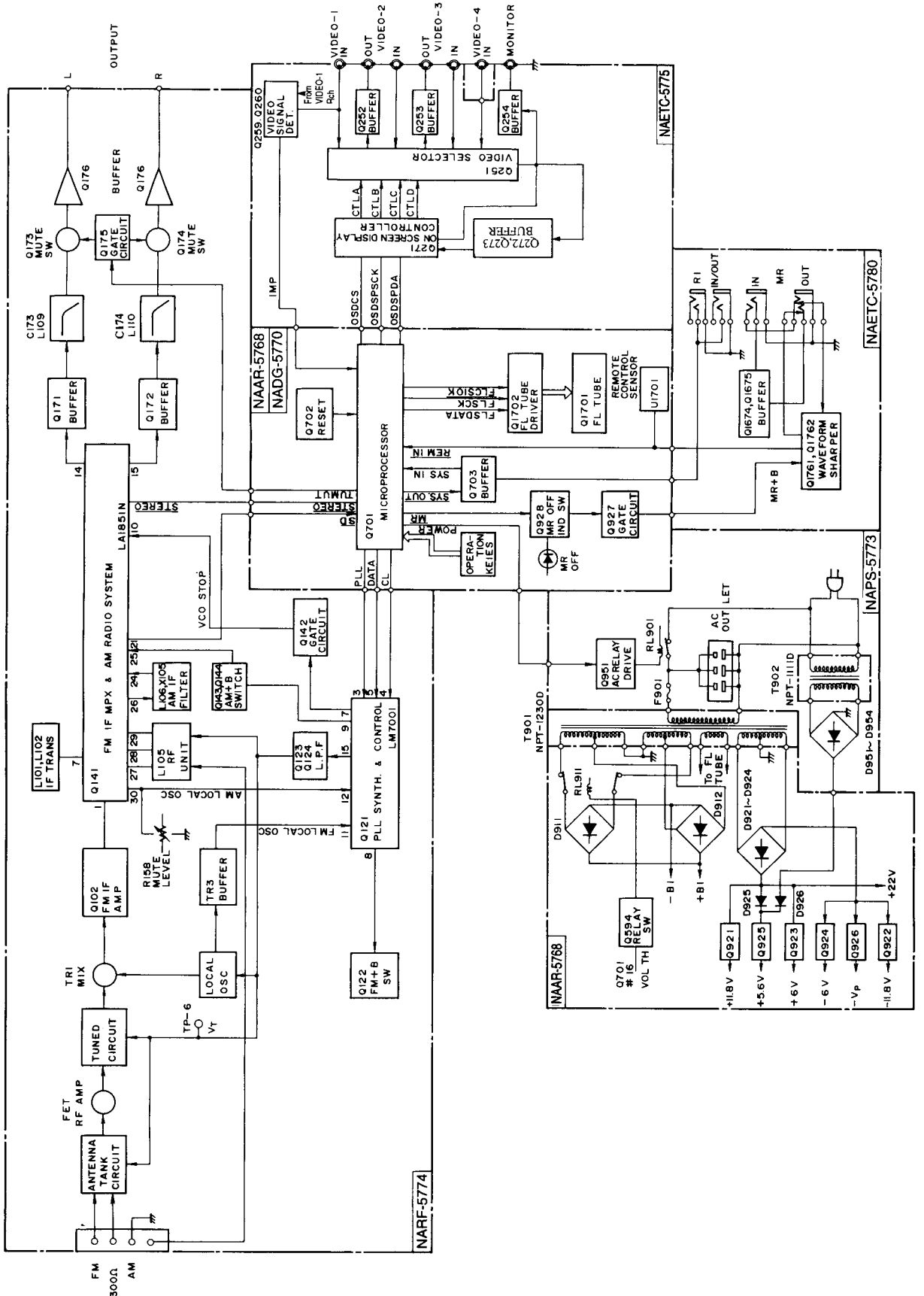
REF.NO.	PART NO.	DESCRIPTION
1	27110833CY	Front bracket
2	27100291Y	Chassis
3	27122225Y	Rear panel <D>
	27122228Y	Rear panel <W>
4	27215253AY	Decorative frame
5	27130743AY	Bracket H
6	27262583-1Y	Plate T
8	27160347-1Y	Radiator
9	27130742Y	Bracket C
11	27141607AY	Retainer H
13	27300750	△ Cord bushing
17	27190369	KGLS-22S, Holder
18	27190062	KGLS-12S, Holder
20	27190926-1Y	KGPS-18RF, Holder
22	801433	3SMS8W_SW+14B(BC), Special screw
23	838130088	3TTB+8B, Self-tapping screw
24	838130088	3TTB+8B, Self-tapping screw
25	830440089	4TTC+8C(BC), Self-tapping screw
27	838230088	3TTB+8B(NI), Self-tapping screw
28	831430088	3TTW+8B(BC), Self-tapping screw
32	28184540AY	Top cover
33	838430088	3TTB+8B(BC), Self-tapping screw
34	838440089	4TTB+8C(BC), Self-tapping screw
36	28140680	0.5×180×8, Cushion
37	28141305Y	0.8×57×8, Cushion
38	27175300-2Y	Leg
39	838130088	3TTB+8B, Self-tapping screw
51	1A651121Y	Front panel ass'y
52	838130088	3TTB+8B, Self-tapping screw
54	8910301	CS-3, CS ring
57	28191699AY	Clear plate
59	28198813Y	Facet
61	28135199Y	Badge
67	28125268Y	End cap L
68	28125267Y	End cap R
81	28325057	Knob, Volume
84	28325055Y	Knob, Tone
91	223021	△ Isolation sheet
92	223023	△ Isolation sheet
99	260208	Wire ties
F901	252166Y	△ 6.3A-UL/T-237, Primary fuse
F902	252076	△ 3.15A-SE-EAK, Primary fuse <W>
JL701	2047402012Y	NGFC7-402012, Flexible flat cable
P901	253192HIT	△ AS-UC-6#18, Power supply cord <D>
	253233KAW	△ AS-CEE-2, Power supply cord <W>
Q521	2201482,	* 25C3281-R,
Q522	2201483,	* 25C3281-O,
	2202822 or	* 25C5200-R or
Q523	2202823	* 25C5200-O, Transistors
	2201472,	* 2SA1302-R,
Q524	2201473,	* 2SA1302-O,
	2202812 or	* 2SA1943-R or
	2202813	* 2SA1943-O, Transistors

REF.NO.	PART NO.	DESCRIPTION
Q621	2202882,	* 2SD2387-R,
Q622	2202883,	* 2SD2387-O,
	2202903,	* 2SD2389-O,
	2202904 or	* 2SD2389-Y or
	2202906	* 2SD2389-P, Transistors
Q623	2202872,	* 2SB1558-R,
Q624	2202873,	* 2SB1558-O,
	2202893,	* 2SB1559-O,
	2202894 or	* 2SB1559-Y or
	2202896	* 2SB1559-P, Transistors
T901	2301071Y	△ NPT-1230D, Power transformer <D>
	2301091Y	△ NPT-1235D, Power transformer <C>
	2301073Y	△ NPT-1230DG, Power transformer <W>
U1	1A651568-1AY	NAAR-5768-1A, Main circuit pc board ass'y <D>
	1A651568-1CY	NAAR-5768-1A, Main circuit pc board ass'y <C>
	1A651568-1DY	NAAR-5768-1A, Main circuit pc board ass'y <W>
U2	1A651569-1AY	NAETC-5769-1A, Secondary circuit pc board ass'y <D>
	1A651569-1CY	NAETC-5769-1C, Secondary circuit pc board ass'y <C>
	1A651569-1DY	NAETC-5769-1D, Secondary circuit pc board ass'y <W>
U4	1A651570-1AY	NADG-5770-1A, Display circuit pc board ass'y <D>
	1A651570-1CY	NADG-5770-1C, Display circuit pc board ass'y <C>
	1A651570-1DY	NADG-5770-1D, Display circuit pc board ass'y <W>
U5	1A651571-1AY	NAAF-5771-1A, Master volume circuit pc board ass'y <D>
	1A651571-1CY	NAAF-5771-1C, Master volume circuit pc board ass'y <C>
	1A651571-1DY	NAAF-5771-1D, Master volume circuit pc board ass'y <W>
U6	1A651572-1AY	NAETC-5772-1A, Headphone terminal pc board ass'y <D>
	1A651572-1CY	NAETC-5772-1C, Headphone terminal pc board ass'y <C>
	1A651572-1DY	NAETC-5772-1D, Headphone terminal pc board ass'y <W>
U7	1A651573-1AY	NAPS-5773-1A, Primary circuit pc board ass'y <D>
	1A651573-1CY	NAPS-5773-1C, Primary circuit pc board ass'y <C>
	1A651573-1DY	NAPS-5773-1D, Primary circuit pc board ass'y <W>
U8	1A651574-1AY	NARE-5774-1A, Tuner circuit pc board ass'y <D>
	1A651574-1CY	NARE-5774-1C, Tuner circuit pc board ass'y <C>
	1A651574-1DY	NARE-5774-1D, Tuner circuit pc board ass'y <W>
U10	1A651575-1AY	NAETC-5775-1A, Video circuit pc board ass'y <D>
	1A651575-1CY	NAETC-5775-1C, Video circuit pc board ass'y <C>
	1A651575-1DY	NAETC-5775-1D, Video circuit pc board ass'y <W>
U12	1A651576-1AY	NAETC-5776-1A, Speaker terminal pc board ass'y <D>
	1A651576-1CY	NAETC-5776-1C, Speaker terminal pc board ass'y <C>
	1A651576-1DY	NAETC-5776-1D, Speaker terminal pc board ass'y <W>
U14	1A651577-1AY	NAAF-5777-1A, Tone control circuit pc board ass'y <D>
	1A651577-1CY	NAAF-5777-1C, Tone control circuit pc board ass'y <C>
	1A651577-1DY	NAAF-5777-1D, Tone control circuit pc board ass'y <W>
U15	1A651578-1AY	NAETC-5778-1A, Front terminal pc board ass'y <D>
	1A651578-1CY	NAETC-5778-1C, Front terminal pc board ass'y <C>
	1A651578-1DY	NAETC-5778-1D, Front terminal pc board ass'y <W>
U16	1A651579-1AY	NAETC-5779-1A, Pre. output terminal pc board ass'y <D>
	1A651579-1CY	NAETC-5779-1C, Pre. output terminal pc board ass'y <C>
	1A651579-1DY	NAETC-5779-1D, Pre. output terminal pc board ass'y <W>
U17	1A651580-1AY	NAETC-5780-1A, MIR/RI terminal pc board ass'y <D>
	1A651580-1CY	NAETC-5780-1C, MIR/RI terminal pc board ass'y <C>
	1A651580-1DY	NAETC-5780-1D, MIR/RI terminal pc board ass'y <W>
U18	1A651581-1AY	NAETC-5781-1A, Transformer terminal pc board ass'y <D>
	1A651581-1CY	NAETC-5781-1C, Transformer terminal pc board ass'y <C>
	1A651581-1DY	NAETC-5781-1D, Transformer terminal pc board ass'y <W>

**NOTE: THE COMPONENTS IDENTIFIED BY MARK △ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.**

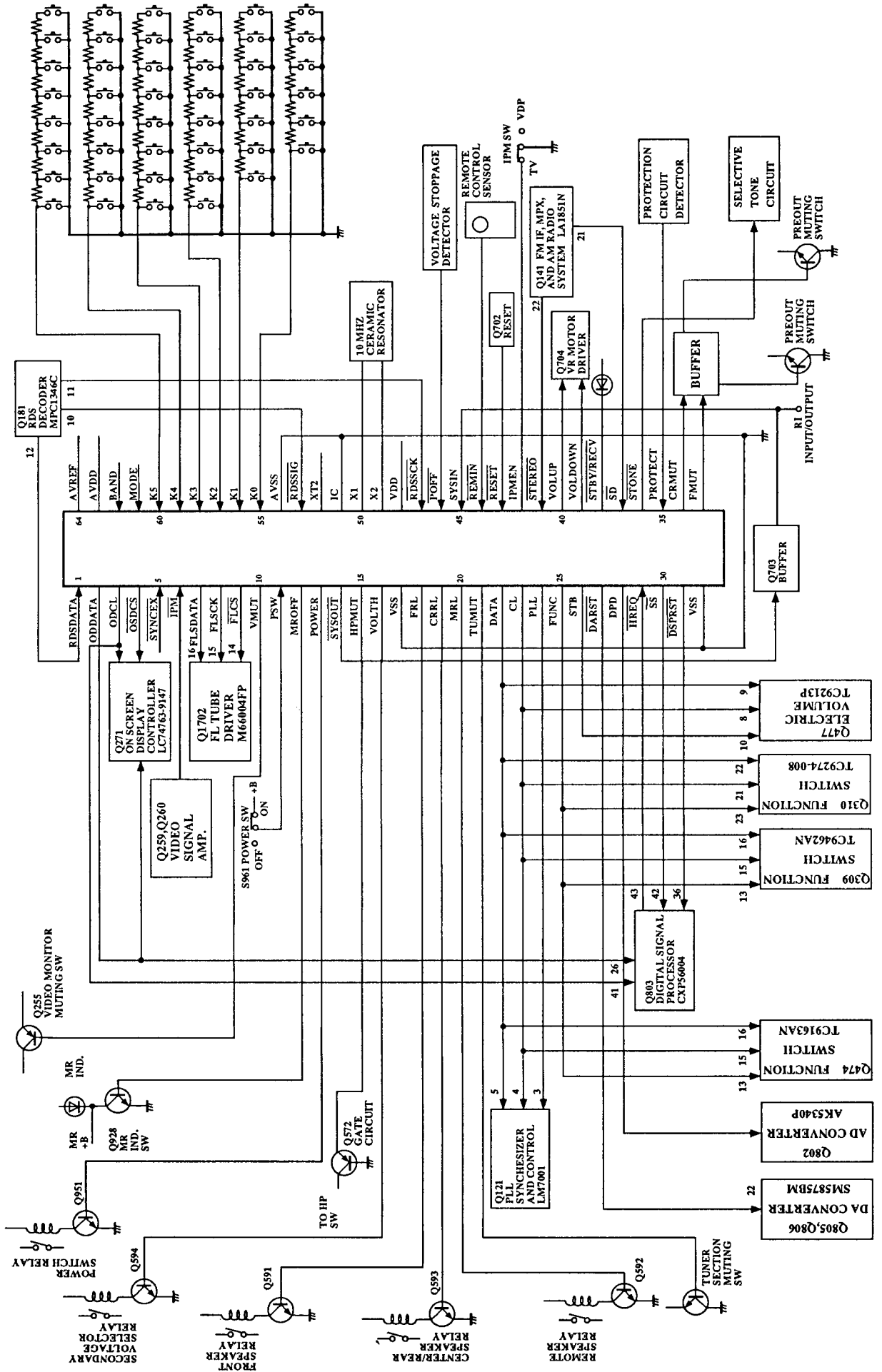
# BLOCK DIAGRAM

Tuner section  
120V model



# MICROPROCESSOR CONNECTION DIAGRAM

μ PD78016CW-053 (MICROPROCESSOR)



# MICROPROCESSOR TERMINAL DESCRIPTIONS

Pin No.	Function	I/O	Description
1	RDSDATA	I	Data input pin from RDS decoder $\mu$ PD1346CS
2	ODDATA	O	Connect to the terminal SIN of OSD controller and terminal MOSI of DSP IC.
3	ODCL	O	Connect to the terminal SCK of OSD controller and terminal SCK of DSP IC.
4	OSDCS	O	Connect to the terminal CS of OSD controller
5	SYNCEX	I	Synchronizing signal control input pin for On-screen display controller. L: External synchronizing Hi: Internal synchronizing
6	IPM	I	Detector input pin for intelligent power management
7	FLSDATA	O	Data output pin for FL tube driver M66004FP
8	FLSCK	O	Clock output pin for FL tube driver M66004FP
9	FLCS	O	Chip select output pin for FL tube driver M66004FP
10	VMUT	O	Muting control output pin for video signal
11	PSW	I	Power switch connection pin
12	MROFF	O	Multi room indicator and control output pin
13	POWER	O	Power source control output pin
14	YSOUT	O	System code output pin
15	HPMUT	O	Muting control output pin for headphone signal
16	VOLTH	O	Secondary voltage control output pin
17	VSS		Ground pin
18	FRL	O	Relay control pin for front speaker
19	CRRL	O	Relay control pin for center and rear speakers
20	MRL	O	Relay control pin for multi source
21	TUMUT	O	Muting output pin for tuner section
22	DATA	O	Data output pin. Connect to the terminals DATA of function switch ICs, PLL and electric volume IC.
23	CL	O	Clock output pin. Connect to the terminals CK of function switch ICs, PLL and electric volume IC.
24	PLL	O	Chip enable output pin for PLL IC
25	FUNC	O	Connect to terminal ST of function switches and terminal STB of TC9274N.
26	STB	O	Connect to the terminal STB of electric volume.
27	DARST	O	Reset output pin for DA converter.
28	DPD	O	Control output pin for digital power down.
29	HREQ	I	Connect to the terminal HREQ of DSP IC.
30	SS	O	Connect to the terminal SS of DSP IC.
31	DSPRST	O	Reset output pin for DSP IC.
32	VSS		Ground pin
33	FMUT	O	Muting output pin for front amplifier
34	CRMUT	O	Muting output pin for center and rear amplifiers
35	PROTECT	I	Detector input pin of protection circuit. H: On
36	STONE	O	Selective tone circuit control output pin. L: On

Pin No.	Function	I/O	Description
37	SD	I	Detector input pin of broadcast more than muting level.
38	STBY/RECV	O	Stand-by and received indicator output pin
39	VOLDOWN	O	Volume control output pin
40	VOLUP	O	Refer table 1.
41	STEREO	I	Detector input pin of FM stereo broadcast
42	IPMEN	I	IPM switch connection pin
43	RESET	I	System reset input pin
44	REMIN	I	Remote control signal input pin
45	SYSIN	I	System code input pin
46	POFF	I	Power stoppage detector input pin
47	RDSSCK	I	Clock input pin from RDS decoder IC $\mu$ PD1346CS
48	VDD		Power supply pin (+5V)
49	X2		Resonator connection terminal for main system clock
50	X1		Connect the ceramic resonator 10MHz.
51	IC		Internal connection pin. Connect to the ground terminal.
52	XT2		Crystal connection pin for sub system clock resonator
53	RDSSIG	I	Detector input pin of RDS broadcast. L: RDS broadcast
54	AVSS		Ground pin of A/D converter
55	K0	I	Operation key connection pin
56	K1	I	Operation key connection pin
57	K2	I	Operation key connection pin
58	K3	I	Operation key connection pin
59	K4	I	Operation key connection pin
60	K5	I	Operation key connection pin
61	MODE	I	Initializing input of operation mode
62	BAND	I	Initializing input of band region and RDS function.
63	AVDO		Analogue power supply of A/D converter
64	AVREF		Reference voltage input pin of A/D converter

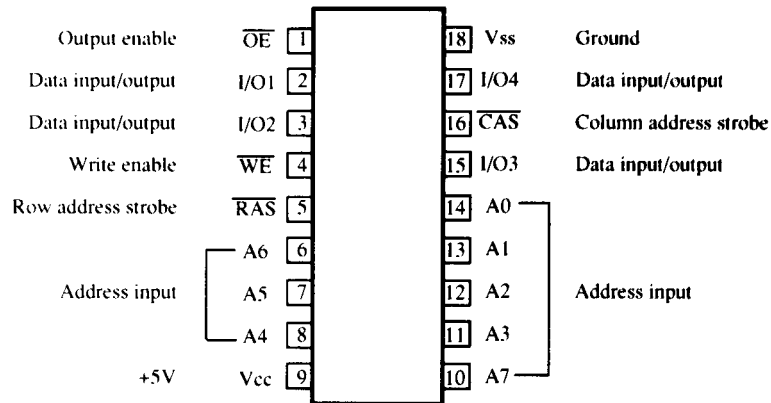
Operation	#39	#40
VOLUME UP	H	L
VOLUME DOWN	L	H
STOP	H	H

Table 1

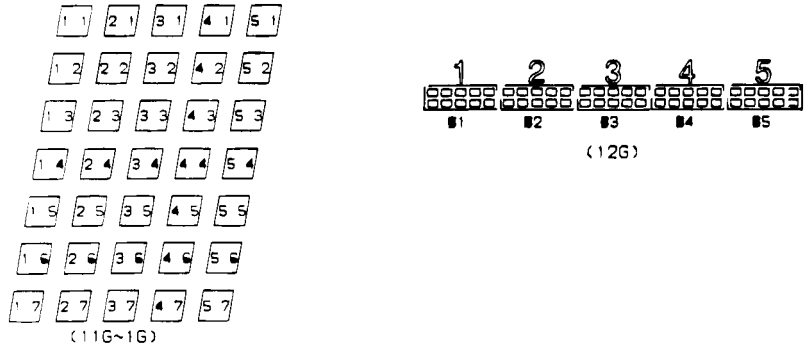
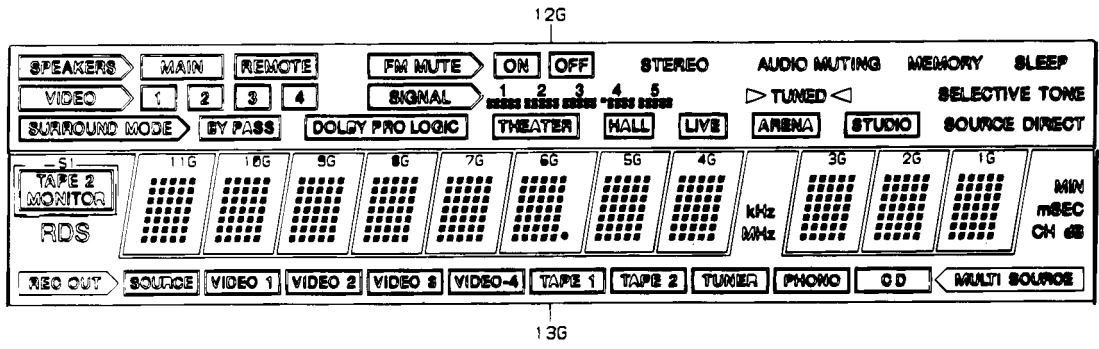


**TX-SV636**

**LH2464-10 (DRAM)**



**13-BT-138GK (FL TUBE)**



PIN NO.	6	6	6	6	6	5	5	5	5	5	5	5	5	5	4
CONNECTION	F	F	N	N	P	P	P	P	P	P	P	P	P	P	P
PIN NO.	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3
CONNECTION	2	2	2	2	2	1	1	1	1	1	1	1	1	1	9
PIN NO.	3	3	3	2	2	2	2	2	2	2	2	2	1	1	1
CONNECTION	P	P	P	P	P	3	P	P	N	N	N	N	N	N	3
PIN NO.	1	1	1	1	1	1	1	9	8	7	6	5	4	3	2
CONNECTION	1	1	1	9	8	7	6	5	4	3	2	1	N	N	F
	2	1	0	0	0	0	0	0	0	0	0	0	P	P	1
	G	G	G	G	G	G	G	G	G	G	G	G	P	P	1

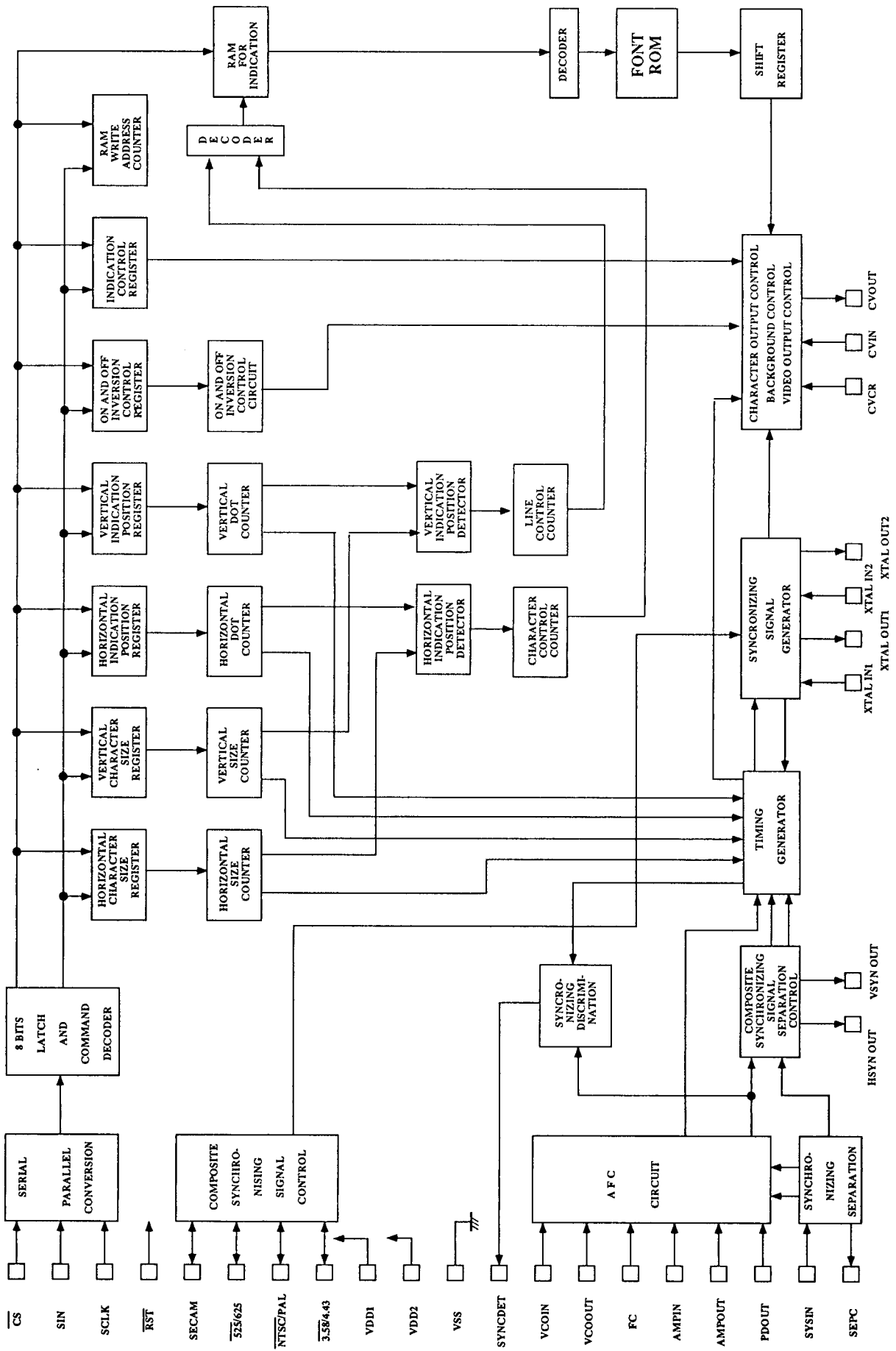
NOTE: F1,F2...Filament  
 NP.....No pin  
 NC....No connection  
 1G ~ 13G....Grid

**XC56004FJ50 (DSP)**

Pin No.	Symbol	Description
1	AGND	GND:EMI control output buffer pin
2	AMC0	This output is Chip selector 0 for SRAM accesses.
3	MA15/MCS3	Address Line 15/Chip Selector 3
4	MA14	Address output for DRAM access
5	MA13	Address output for DRAM access
6	AVCC	Vcc:EMI address/control output buffer pin
7	MA12	Address output for DRAM access
8	AGND	GND:EMI address output buffer pin
9	QVCC	Vcc:Internal Logic supply pin
10	QGND	GND:Internal Logic supply pin
11	MA11	Address output for DRAM access
12	MA10	Address output for DRAM access
13	MA9	Address output for DRAM access
14	MA8	Address output for DRAM access
15	AGND	GND:EMI address output buffer pin
16	MA7	Address output for DRAM access
17	AVCC	Vcc:EMI address/control output buffer pin
18	MA6	Address output for DRAM access
19	MA5	Address output for DRAM access
20	MA4	Address output for DRAM access
21	AGND	GND:EMI address output buffer pin
22	MA3	Address output for DRAM access
23	MA2	Address output for DRAM access
24	MA1	Address output for DRAM access
25	MA0	Address output for DRAM access
26	SCK/SCL	SPI Serial Clock/I C Serial clock
27	EXTAL	This input should be connected to an external clock source.
28	QVCC	Vcc:Internal Logic supply pin
29	QGND	GND:Internal Logic supply pin
30	PINIT	PLL Initialization pin
31	PGND	GND:PLL supply pin
32	PCAP	Off-chip capacitor connection pin for PLL filter
33	PVCC	Vcc:PLL supply pin
34	SGND	GND:SAI,SHI & ONCE output buffer supply pin
35	MISO/SDA	SPI Master-In-Slave-Out/I C Data and Acknowledge
36	RESET	This input is a direct hardware reset of the processor.
37	MODA/IRQA	Mode Select A/External Interrupt Request A/STOP Recovery
38	MODB/IRQB	Mode Select B/External Interrupt Request B
39	MODC/NMI	Mode Select C/Non-Maskable Interrupt Request
40	SVCC	Vcc:SAI,SHI & ONCE output buffer supply pin

Pin No.	Symbol	Description
41	MOSI/HA0	SPI Master-Out-Slave-In/I C Slave Address 0
42	SS/HA2	SPI Slave Selector/I C Slave Address 2
43	HREQ	Host Request
44	SGND	GND:SAI,SHI & ONCE output buffer supply pin
45	SDO2	Serial Data Output 2
46	SDO1	Serial Data Output 1
47	SDO0	Serial Data Output 0
48	SVCC	Vcc:SAI,SHI & ONCE output buffer supply pin
49	SCKT	Transmit Serial Clock
50	WST	Transmit Word Select
51	SCKR	Receive Serial Clock
52	QGND	GND:Internal Logic supply pin
53	QVCC	Vcc:Internal Logic supply pin
54	SGND	GND:SAI,SHI & ONCE output buffer supply pin
55	WSR	Receive Word Select
56	SDI1	Serial Data Input 1
57	SDI0	Serial Data Input 0
58	DSO	Debug Serial Output
59	DSI/OSO	Debug Serial Input/Chip Status 0
60	DSCK/OS1	Debug Serial Clock/Chip Status 1
61	DR	Debug Request Input
62	MD7	Data Bus input/output pin
63	MD6	Data Bus input/output pin
64	MD5	Data Bus input/output pin
65	MD4	Data Bus input/output pin
66	DGND	GND:EMI data bus & GPIO output buffer pin
67	MD3	Data Bus input/output pin
68	MD2	Data Bus input/output pin
69	MD1	Data Bus input/output pin
70	DVCC	Vcc:EMI data bus & GPIO output buffer pin
71	MDO	Data Bus input/output pin
72	DGND	GND:EMI data bus & GPIO output buffer pin
73	GPIO3	General Purpose Input/Output 3
74	GPIO2	General Purpose Input/Output 2
75	GPIO1	General Purpose Input/Output 1
76	GPIO0	General Purpose Input/Output 0
77	MRD	Data Read Strobe
78	MWR	Data Write Strobe
79	MA17/MCS1/MRAS	Address Line 17/Chip selector 1/Row Address Strobe
80	MA16/MCS2/MCAS	Address Line 16/Chip selector 2/Column Address Strobe

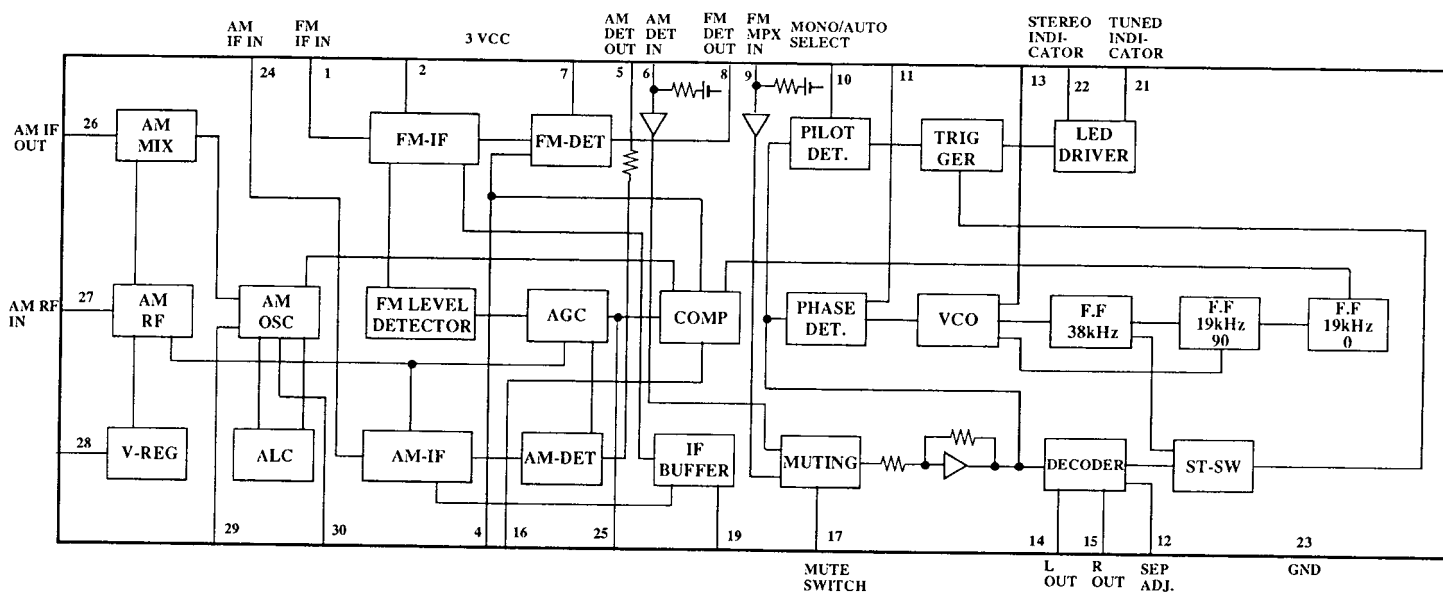
LC74763 (TV Character / Pattern Indicator)



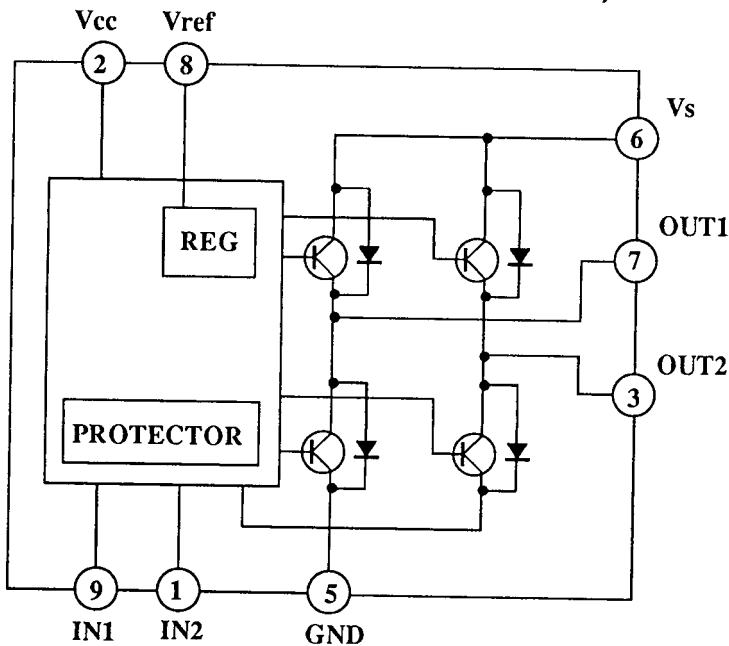
# TX-SV636

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	VSS	Ground pin	16	CVOUT	Composite video signal output pin
2	XTAL IN1	Crystal resonator connection pin for internal synchronizing signal generation	17	VDD2	Power supply pin for Composite video signal
3	XTAL OUT1		18	CVIN	Composite video signal input pin
4	HSYNCOUT	Horizontal synchronizing signal output pin	19	CVCR	Chroma signal input pin for SECAM
5	XTAL IN2	Crystal resonator connection pin for internal synchronizing signal generation	20	SYNCIN	Video signal input pin for internal synchronizing separation circ
6	XTAL OUT2		21	SEPC	Bias output pin for internal synchronizing separation circuit
7	VSYNCOUT	Vertical synchronizing signal output pin	22	VSS	Ground pin
8	CS	Chip enable input pin for serial data input	23	PDOUT	Voltage output pin for AFC circuit
9	SIN	Serial data input pin	24	AMPIN	Filter connection pin
10	SCLK	Clock input pin for serial data	25	AMPOUT	
11	SECAM	SECAM mode selector input pin	26	FC	Voltage output pin for AFC circuit
12	525/625	Selector pin for scansion line	27	VCOIN	LC resonator connection pins for VCO
13	NTSC/PAL	Selector pin for NTSC or PAL	28	VCOOUT	
14	3.58/4.43	Selector pin for 3.58MHz or 4.43MHz	29	SYNCDDET	External synchronizing signal discrimination output pin
15	RST	System reset input pin	30	VDD1	Power supply pin

## LA1851N-F (FM IF, MPX AND AM RADIO SYSTEM)



## TA7291 (VOLUME MOTOR DRIVER)



INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

CCW:Counter-clockwise direction  
CW:Clockwise direction

# ADJUSTMENT PROCEDURES

## Preparation

### 1. Input

FM mono: 1kHz, 75kHz devi., 60dB/ $\mu$ V

FM stereo: 1kHz, 67.5kHz devi., 60dB/ $\mu$ V

Pilot signal 19kHz 7.5kHz devi.

AM: 400Hz, 30% mod.

### 2. Outputs

Connect the non-inductive type resistor of 8 ohms to the all speaker terminals unless otherwise noted.

## 1. FM ADJUSTMENT

Item	Step	Connection of instrument	FM SG output	Stereo modulator output	Tuning frequency	Output indicator	Adjustment point	Adjust for	Remarks
FM IF/RF	1	Fig.1	99.0MHz 1kHz 75kHz devi. 65dBf(60dB)	—	99.0MHz	DC voltmeter	L101	0 $\pm$ 20mV	FM MUTE/MODE switch:OFF/MONO Repeat the steps 1 and 3 until no further adjustment is necessary.
	AC voltmeter					IFT on the front end	Maximum		
	Distortion analyzer					L102	Minimum		
Stereo Distortion		Fig.2	99.0MHz Ext. mod.65dBf(60dB)	Channel L or R 1kHz	99.0MHz	Distortion analyzer	IFT on the front end	Minimum	Don't turn more than $\pm 180^\circ$
Stereo Separation	1	Fig.2	99.0MHz Ext. mod. 65dBf(60dB)	Channel L 1kHz	99.0MHz	Channel R AC voltmeter	R150	Minimum	Maximum and same separation
	2			Channel R 1kHz		Channel L AC voltmeter		Minimum	
Muting Level		Fig.2	99.0MHz 19.2dBf(14dB)	—	99.0MHz	Oscilloscope	R158	Signal output	
RDS		Fig.3	99.0MHz Ext. mod.60dB	RDS data or 57kHz 3% devi.	99.0MHz	Oscilloscope	R191	Maximum	European model only

## 2. AM ADJUSTMENT

### 120V model

Step	AM SG output	Tuning Frequency	Output Indicator	Adjustment point	Adjust for
1		530kHz	Digital DC voltmeter	OSC coil on RF block L151	1.4 $\pm$ 0.2V
2	600kHz 400Hz 30% mod. 60dB/m	600kHz	AC voltmeter	RF coil on RF block L151	Maximum
3	990kHz 400Hz 30% mod. 60dB/m	990kHz	AC voltmeter	L152	Maximum

### Reference Specification

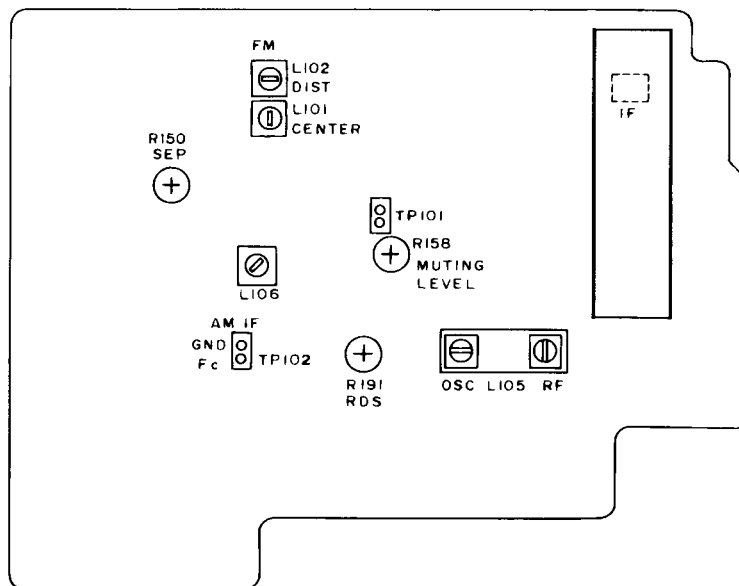
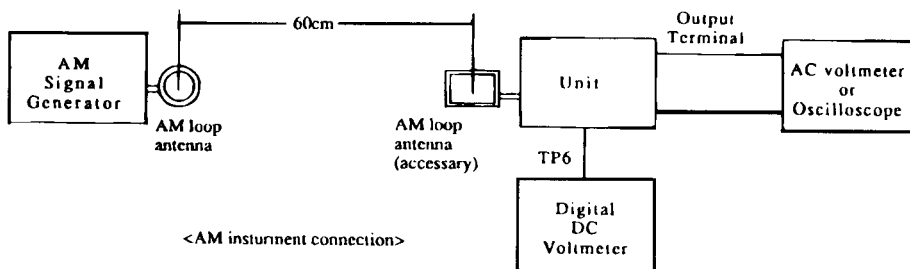
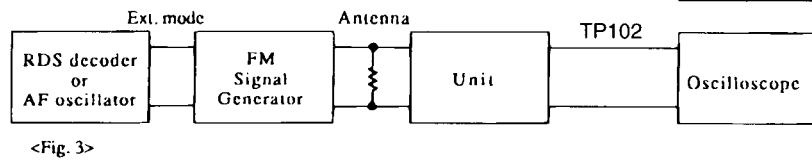
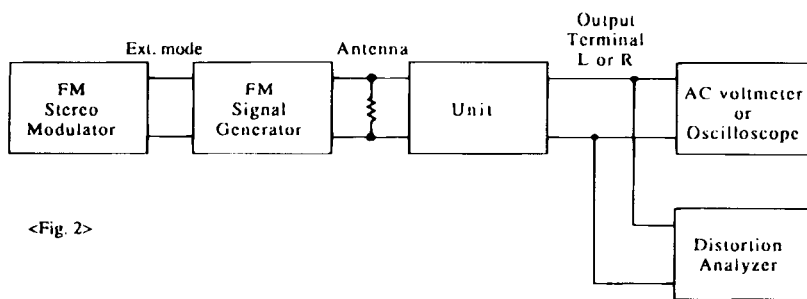
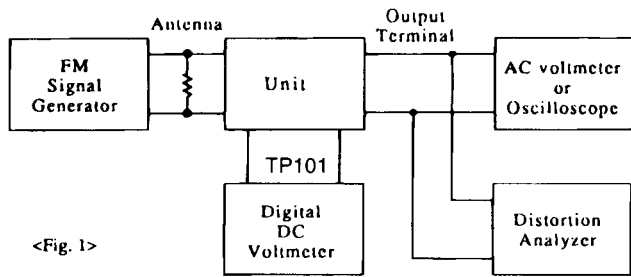
FM tuned voltage:87.5MHz~108.0MHz  
More than 1.3V ~Less than 10V  
AM tuned voltage:530kHz~1710kHz  
1.4 $\pm$ 0.2V ~Less than 9.0V

### 230V and Worldwide models

Step	AM SG output	Tuning Frequency	Output Indicator	Adjustment point	Adjust for
1		522kHz or 531kHz	Digital DC voltmeter	OSC coil on RF block L151	1.3 $\pm$ 0.1V
2	603kHz 400Hz 30% mod. 60dB/m	603kHz	AC voltmeter	RF coil on RF block L151	Maximum
3	999kHz 400Hz 30% mod. 60dB/m	999kHz	AC voltmeter	L152	Maximum

### Reference Specification

FM tuned voltage:87.5MHz~108.0MHz  
More than 1.3V ~Less than 10V  
AM tuned voltage:522kHz~1611kHz  
1.3 $\pm$ 0.2V~Less than 9.0V  
(230V model)  
AM tuned voltage:531kHz~1602kHz  
1.3V $\pm$ 0.2~Less than 9.0V  
(Worldwide model)



**Adjustment point**

11 JT

1F

## PRINTED CIRCUIT BOARD-PARTS LIST

CAUTION: Replacement of the transistor of mark \*, must be made from the same beta group (Hiz original type).

MAIN CIRCUIT PC BOARD (NAAR-5768-1A/1B/1D/1E/1F)			CIRCUIT NO.	PART NO.	DESCRIPTION
				<b>Diodes</b>	
			D503,D504	22380012F	HER303F
			D505,D506	223205,	1SS270A,
			D571-D574	223163 or	1SS133 or
			D591-D594	223222	WG713A
			D603,D604	22380012F	HER303F
			D605,D606	223205,	1SS270A,
			D701-D705	223163 or	1SS133 or
			D930,D931	223222	WG713A
			D706	224470562	MTZJ5.6B
			D911,D912	22380274,	RS603M,
				22380038 or	RBV602 or
				22380070	D5SBA60
			D921-D928	22380046 or	AM01Z or
			D934	22380035	GP104003E
			D929	224473604	MTZJ36D
			D932	224470623	MTZJ6.2C
			D933	223205,	1SS270A,
				223163 or	1SS133 or
				223222	WG713A
				<b>Coils</b>	
			L501,L502	231176S	S-1.3C
			L601,L602	231176S	S-1.3C
			L701	233454K220	NCH-1452 220K
				<b>Capacitors</b>	
			C265,C935	354741009	10 $\mu$ F,16V,Elect.
			C303,C304	354741009	10 $\mu$ F,16V,Elect.
			C307,C308	354721019	100 $\mu$ F,6.3V,Elect.
			C309,C310	374726824	6800pF $\pm$ 5%,50V,Plastic
			C311,C312	374721824	1800pF $\pm$ 5%,50V,Plastic
			C313,C314	354741009	10 $\mu$ F,16V,Elect.
			C315,C316	354744709	47 $\mu$ F,16V,Elect.
			C523,C524	354741019	100 $\mu$ F,16V,Elect.
			C525,C526	374721044	0.1 $\mu$ F $\pm$ 5%,50V,Plastic
			C531,C532	354764709	47 $\mu$ F,35V,Elect.
			C533,C534	374724734	0.047 $\mu$ F $\pm$ 5%,50V,Plastic
			C535,C536	374721044	0.1 $\mu$ F $\pm$ 5%,50V,Plastic
			C537,C538	354741019	100 $\mu$ F,16V,Elect.
			C571-C573	354741009	10 $\mu$ F,16V,Elect.
			C623,C624	354741019	100 $\mu$ F,16V,Elect.
			C633,C634	374724734	0.047 $\mu$ F $\pm$ 5%,50V,Plastic
			C637,C638	354741019	100 $\mu$ F,16V,Elect.
			C671	354722219	220 $\mu$ F,6.3V,Elect.
			C701	3000076 or	EECSSR5T104 or
				3000078	DX-5R5L104,Super
			C702,704,710	354721019	100 $\mu$ F,6.3V,Elect.
			C703	375524744	0.47 $\mu$ F $\pm$ 5%,50V,Plastic
			C705,C709	354741009	10 $\mu$ F,16V,Elect.
			C913,C914	375521044	0.1 $\mu$ F $\pm$ 5%,50V,Plastic <P>
			C915,C916	3504259	12000 $\mu$ F,71V,Elect.
			C923	354754729	4700 $\mu$ F,25V,Elect.
			C924	354761029	1000 $\mu$ F,35V,Elect.
			C927,C928	354741009	10 $\mu$ F,16V,Elect.
			C931,C932	354741009	10 $\mu$ F,16V,Elect.
			C933	354751029	1000 $\mu$ F,25V,Elect.
			C936	354762219	220 $\mu$ F,35V,Elect.
			C937	354782219	220 $\mu$ F,50V,Elect.
			C940	354754719	470 $\mu$ F,25V,Elect.
			C944	354761019	100 $\mu$ F,35V,Elect.

**TX-SV636**

NOTE: <D>:120 V model only  
 <P>:230 V model only  
 <W>:Worldwide model only

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Resonator</b>	
X701	3010239Y	CST10.0MTW
	<b>Resistors</b>	
R541,R542	443521014	100 Ohm ± 5%, 1/2W, Metal oxide
R543,R544	4000132	RGC55 0.22OHMK,Metal plate
R549-R552	453630474	4.7 Ohm ± 5%, 1W, Metal
R553,R554	443523924	3.9 kohm ± 5%, 1/2W, Metal oxide
R559,R560	453530824	8.2 Ohm ± 5%, 1/2W, Metal
R567,R568	453530104	1 Ohm ± 5%, 1/2W, Metal
R569,R570	443521014	100 Ohm ± 5%, 1/2W, Metal oxide
R643,R644	4000132	RGC55 0.22OHMK,Metal plate
R649,R650	453630824	8.2 Ohm ± 5%, 1W, Metal
R653,R654	443523324	3.3 kohm ± 5%, 1/2W, Metal oxide
R659,R660	453530824	8.2 Ohm ± 5%, 1/2W, Metal
R923	453530104	1 Ohm ± 5%, 1/2W, Metal
R924	453530824	8.2 Ohm ± 5%, 1/2W, Metal
R925,R926	443621204	12 Ohm ± 5%, 1W, Metal oxide
R927	453530824	8.2 Ohm ± 5%, 1/2W, Metal
R928	443621804	18 Ohm ± 5%, 1W, Metal oxide
R929,R930	443621514	150 Ohm ± 5%, 1W, Metal oxide
R931	443522204	22 Ohm ± 5%, 1/2W, Metal oxide
R934	443523314	330 Ohm ± 5%, 1/2W, Metal oxide
R935	443522204	22 Ohm ± 5%, 1/2W, Metal oxide
R938	453530104	1 Ohm ± 5%, 1/2W, Metal
	<b>Relaies</b>	
RL501-RL503	25065339 or 25065517Y	NRL-2P5A-DC24-046 or NRL-2P5A-DC24-098
RL911	25065339	NRL-2P5A-DC24-046
	<b>Plugs</b>	
P201a	25055652 25055653	NPLG-14P608 <D/W> NPLG-16P609 <P>
P321a	25055133	NPLG-3P117
P535,P536	25055038	NPLG-2P29
P601a	25055651	NPLG-12P607
P602a	25055654	NPLG-18P610
P603a	25055652	NPLG-14P608
P635,P636	25055038	NPLG-2P29
	<b>Terminals</b>	
P301-P303	25045300 or 25045458	NPJ-6PDBL159 or NPJ-6PDBL279
P304	25045303 or 25045460	NPJ-4PDBL162 or NPJ-4PDBL281
P501	25060244 or 25060125	NTM-8PDMN164 or NTM-8PDMN058,Speaker
	<b>Wire clamper</b>	
P921	260224	CP-1S
	<b>Wire holders</b>	
JL251a	25051095	NSCT-11P882
JL501a	25051108	NSCT-4P895
JL502a	25051088	NSCT-4P875
JL503a,JL801a	25051087	NSCT-3P874
JL702a	25051093	NSCT-9P880
JL911a	25051113	NSCT-9P900
JL921a	25051109	NSCT-5P896
	<b>Wire traps</b>	
JL401b	25055630	NPLG-9P592
JL701a	25050980 or 25051306	NSCT-40P767 or NSCT-40P1095

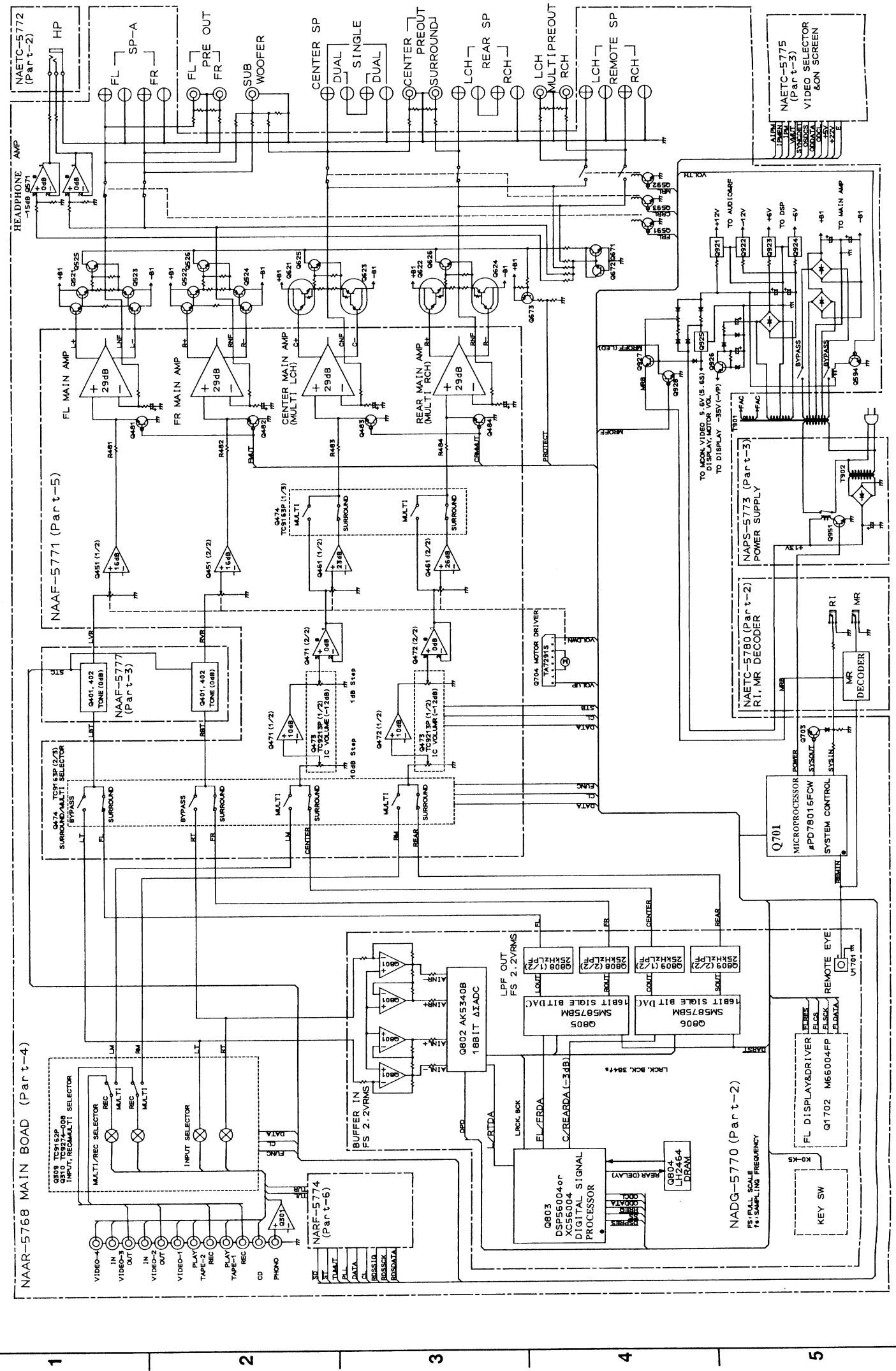
**SECONDARY CIRCUIT PC BOARD (NAETC-5769-1A/1B/1D/1E/1F)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Resistors</b>	
R921,R922	453534794	0.47 Ohm ± 5%,1/2W, Metal
R941	453534794	0.47 Ohm ± 5%,1/2W, Metal
	<b>Wire holders</b>	
JL911b	25051113	NSCT-9P900
JL921b	25051109	NSCT-5P896
	<b>DISPLAY CIRCUIT PC BOARD (NADIS-5770-1A/1B/1C)</b>	
CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Remote sensor</b>	
U1701	24130011	PIC-12043TE2
	<b>FL tube</b>	
Q1701	212138	13-BT-138GK
	<b>ICs</b>	
Q1702	22240685R9	M66004FP
Q801	22240293 or	NJM4558L-D or
Q807~Q809	22240247	BA15218N
Q802	22241013	AK5340B
Q803	22240831R3	XC56004FJ50
Q804	22240720 or	LH2464-10 or
	22240867	LC3246P-80
Q805,Q806	22240832R9	SM5875BM
	<b>Transistors</b>	
Q811	2213284 or	2SC1740S-R or
Q1704,Q1705	2212115	2SC2458-GR
Q1703	221282 or	DTC144ES or
	2213560	RN1204
	<b>LEDs</b>	
D1701,D1702	225291D	SEL4910D-D
	<b>Diodes</b>	
D801	223205,	1SS270A,
D1703,D1711	223163 or	1SS133 or
D1713,D1714	223222	WG713A
D802	22380046 or	AM01Z or
	22380035	GP104003E
D803	224470562	MTZJ5.6B
D961	223205,	1SS270A,
	223163 or	1SS133 or
	223222	WG713A <P>
D1712	224471303	MTZJ13C
	<b>Core</b>	
L801	230906	BL02RN2-R62
	<b>Coils</b>	
L802,L803	233454K220	NCH-1452 220K
L811	233454K220	NCH-1452 220K
L818-L820	233454K220	NCH-1452 220K
	<b>Resonator</b>	
X801	3010112	KD6586FFB
	<b>Capacitors</b>	
C1702,C1711	353741009	10 μ F,16V,Elect.
C1714	375524744	0.47 μ F ± 5%,50V,Plastic
C1716	353781009	10 μ F,50V,Elect.
C1717	353721019	100 μ F,6.3V,Elect.
C1718,C1719	375524744	0.47 μ F ± 5%,50V,Plastic
C801,C802	353741009	10 μ F,16V,Elect.
C807,C808	374721024	1000pF ± 5%,50V,Plastic
C809,C815	353741009	10 μ F,16V,Elect.
C811,C818	353721019	100 μ F,6.3V,Elect.



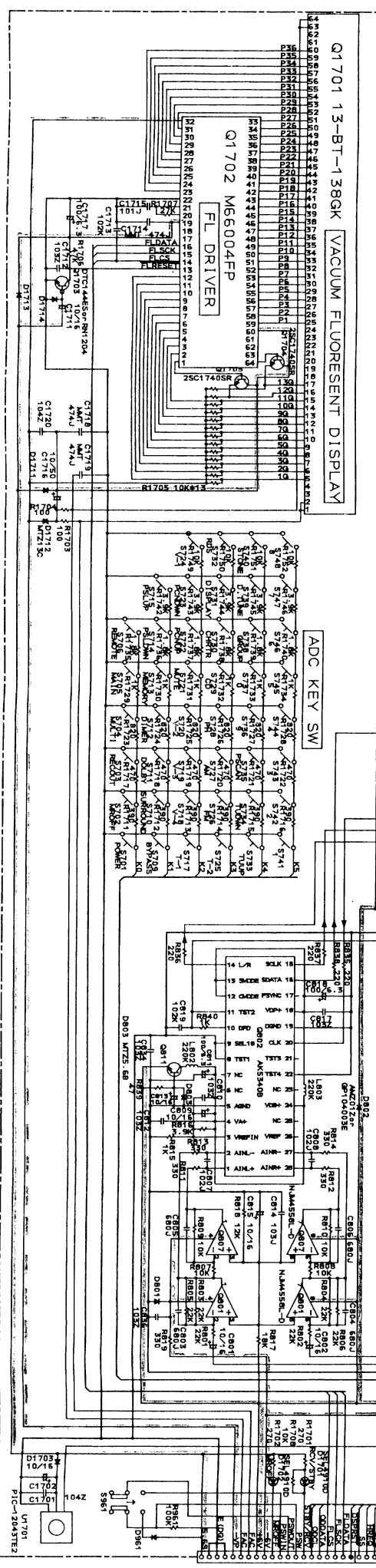
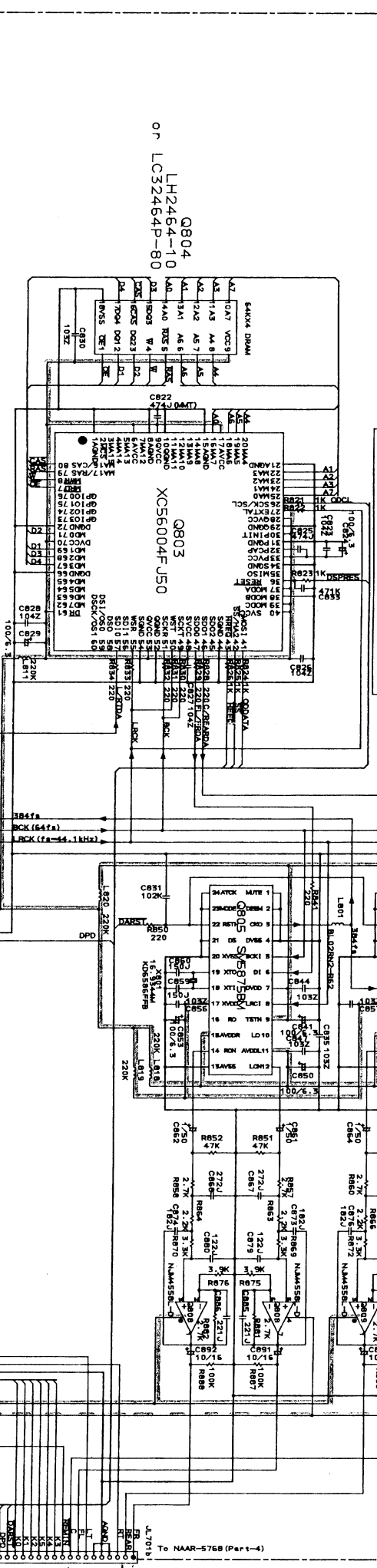
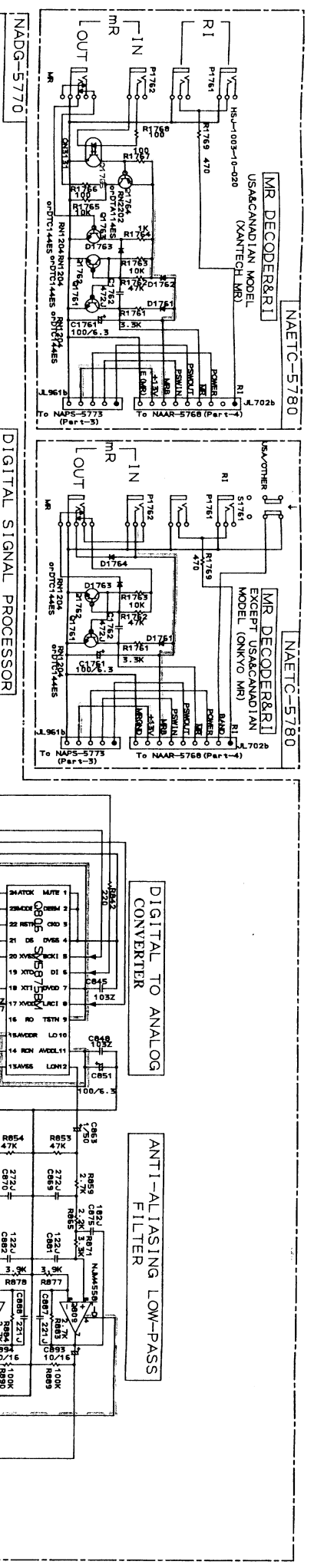
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SCHEMATIC DIAGRAM 1/6



# SCHEMATIC DIAGRAM 2/6

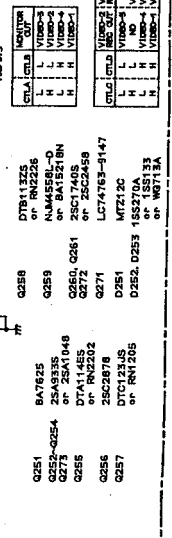
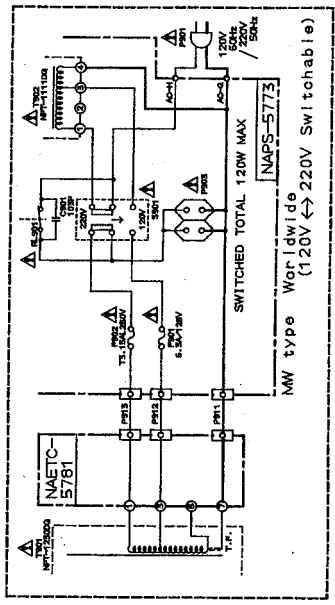
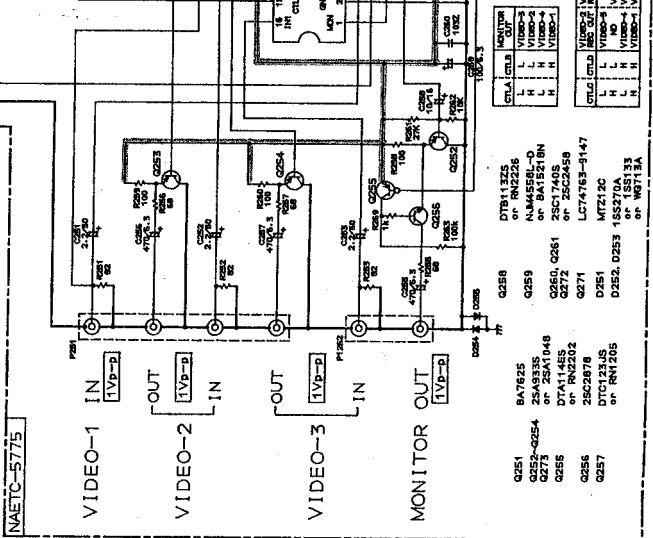
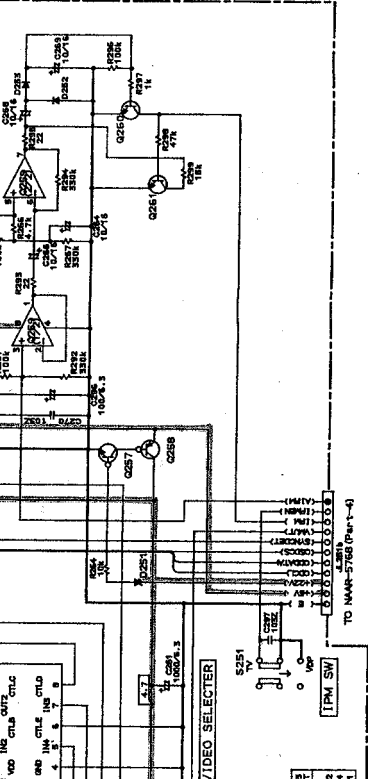
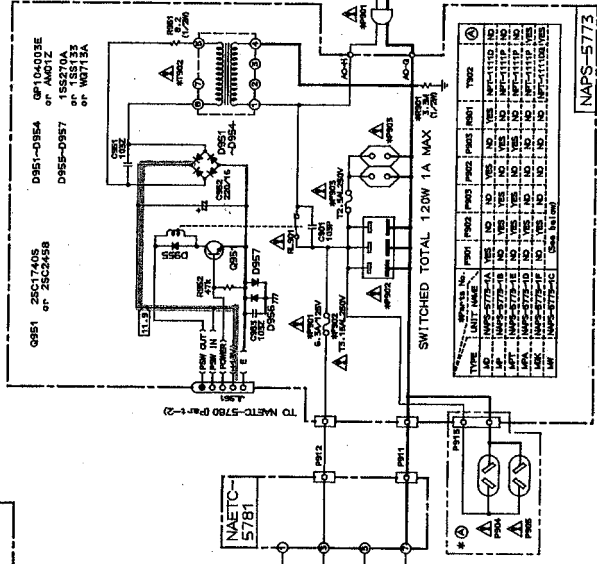
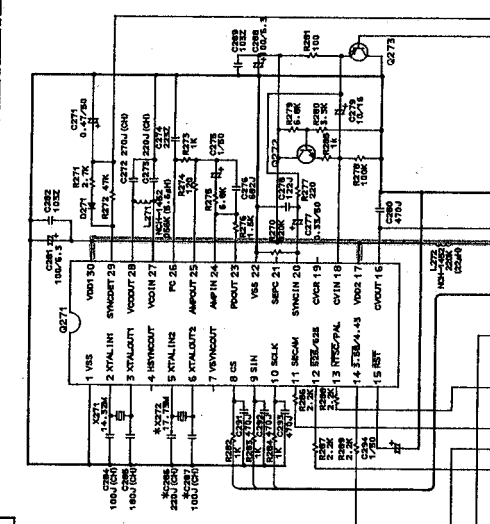
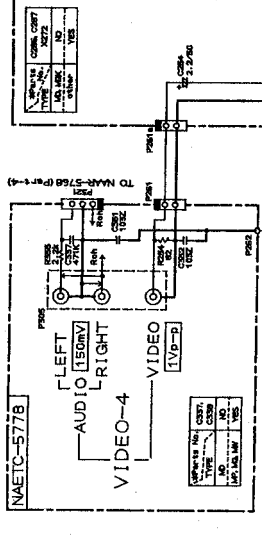
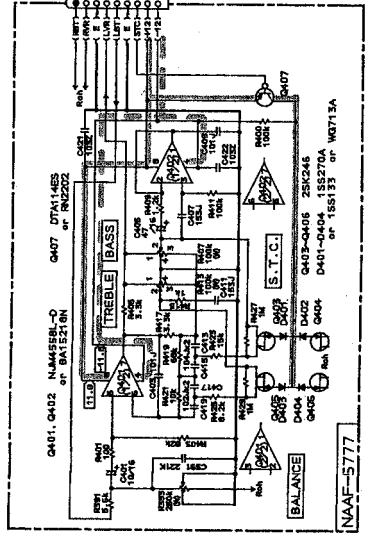
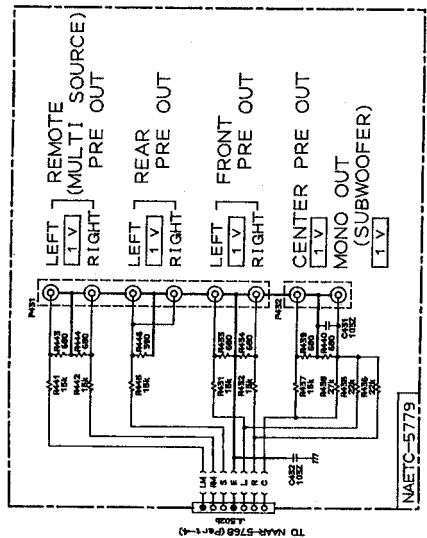
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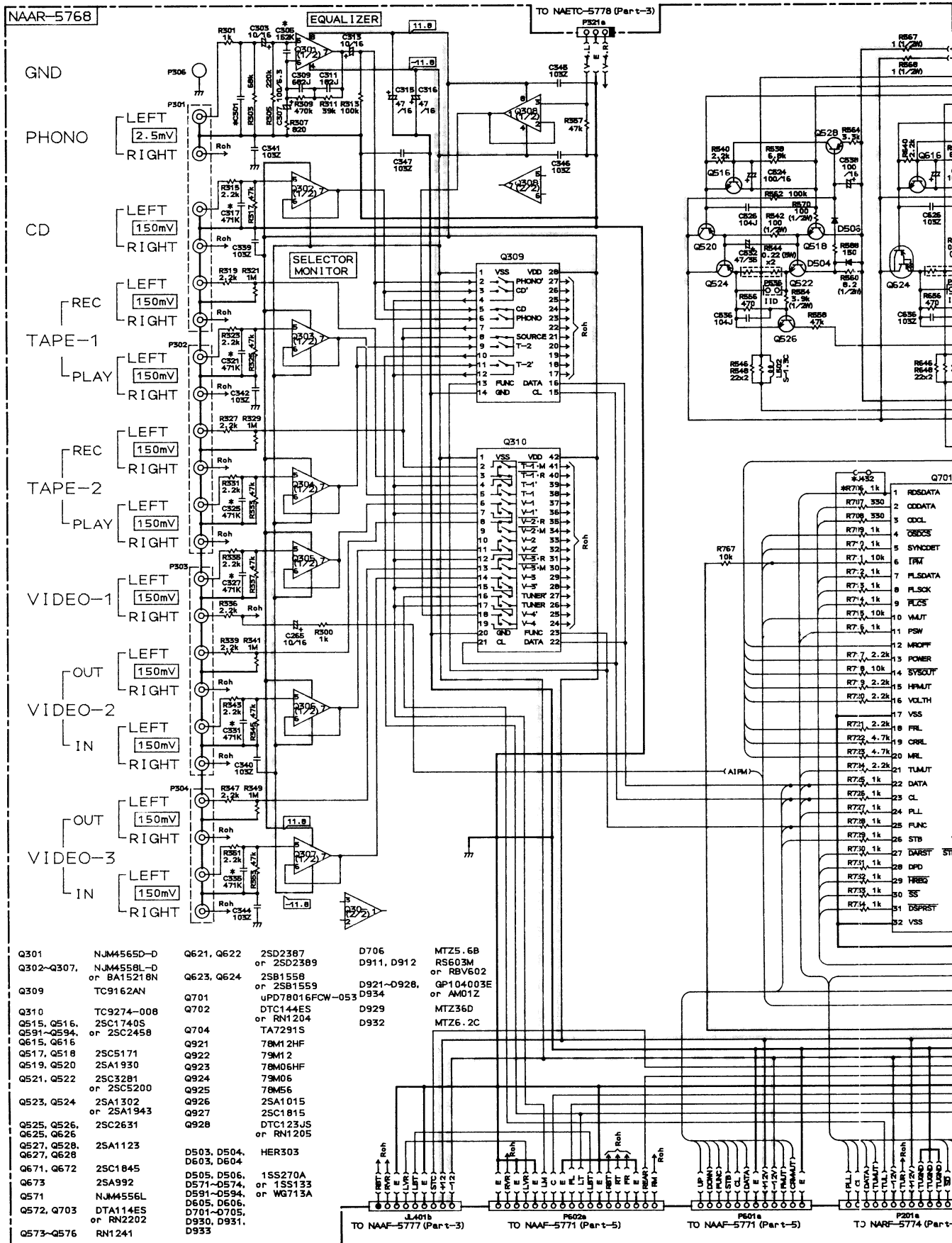
FR  
Rear  
FL

A B C D E F G

SCHEMATIC DIAGRAM 3/6

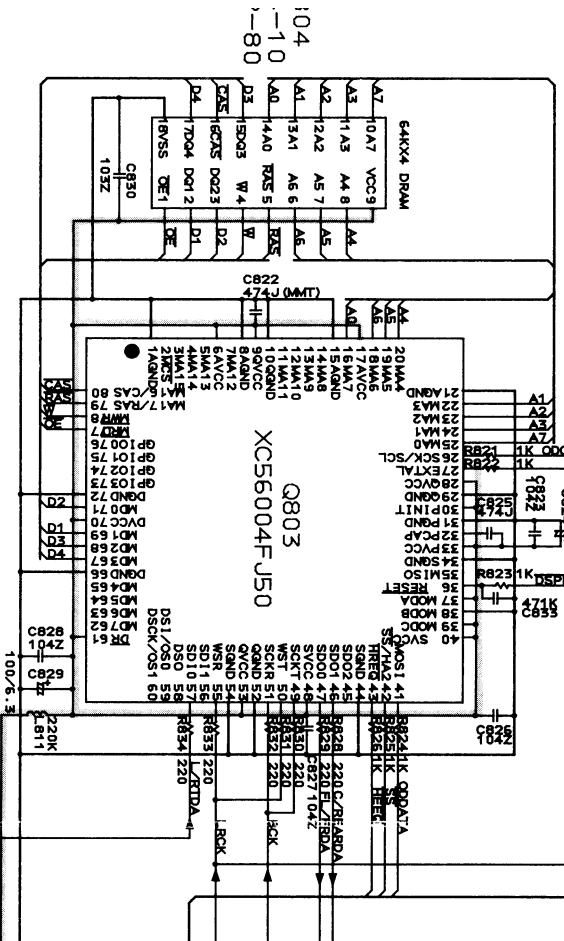


A B C D  
**SCHEMATIC DIAGRAM 4/6**

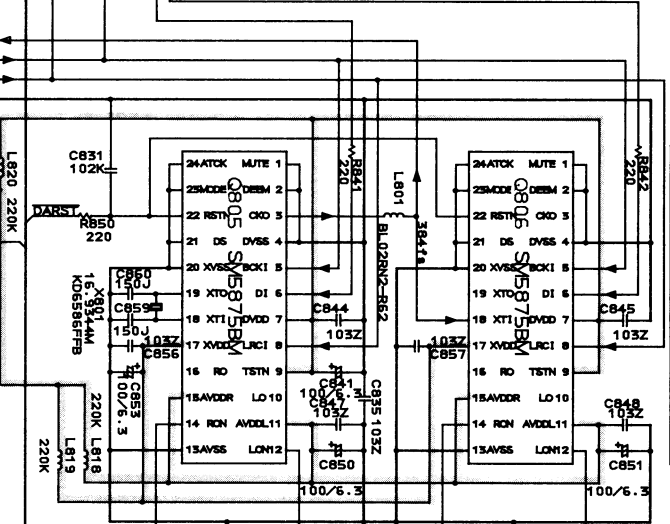




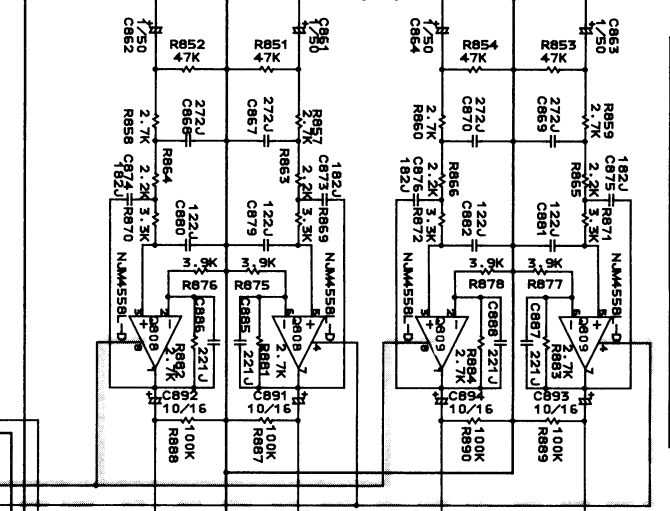
DIGITAL SIGNAL PROCESSOR



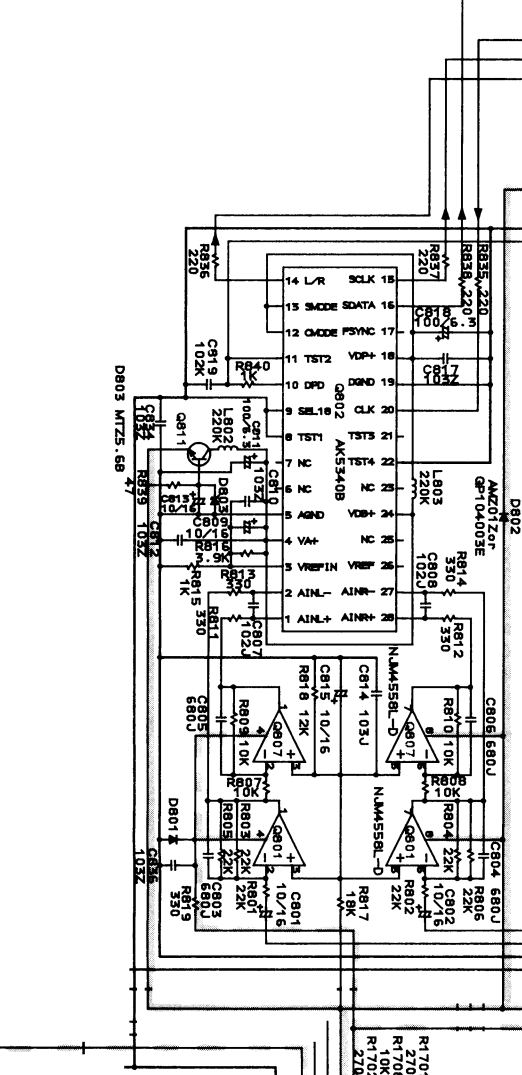
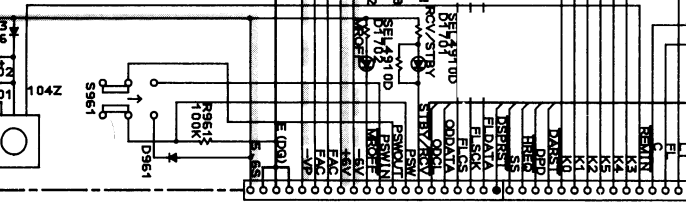
DIGITAL TO ANALOG CONVERTER



ANTI-ALIASING LOW-PASS FILTER



To NAAR-5768 (Part 4)



## PRINTED CIRCUIT BOARD-PARTS LIST

NOTE: <D>:120 V model only  
<P>:230 V model only  
<W>:Worldwide model only

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
<b>Capacitors</b>					
C814	374721034	0.01 $\mu$ F $\pm$ 5%,50V,Plastic	C451,C452	354780229	2.2 $\mu$ F,50V,Elect.
C820,C821	353721019	100 $\mu$ F,6.3V,Elect.	C457-C460	354741009	10 $\mu$ F,16V,Elect.
C822,C825	374724744	0.47 $\mu$ F $\pm$ 5%,50V,Plastic	C461,C462	354780229	2.2 $\mu$ F,50V,Elect.
C824	353721019	100 $\mu$ F,6.3V,Elect.	C467-C470	354741009	10 $\mu$ F,16V,Elect.
C829,C841	353721019	100 $\mu$ F,6.3V,Elect.	C471,C472	354780229	2.2 $\mu$ F,50V,Elect.
C850,C853	353721019	100 $\mu$ F,6.3V,Elect.	C475,C476	354741009	10 $\mu$ F,16V,Elect.
C861-C864	353780109	1 $\mu$ F,50V,Elect.	C477,C478	354780229	2.2 $\mu$ F,50V,Elect.
C867-C870	374722724	2700pF $\pm$ 5%,50V,Plastic	C479,C480	354741009	10 $\mu$ F,16V,Elect.
C873-C876	374721824	1800pF $\pm$ 5%,50V,Plastic	C491,C492	354741009	10 $\mu$ F,16V,Elect.
C879-C882	374721224	1200pF $\pm$ 5%,50V,Plastic	C495-C498	354741009	10 $\mu$ F,16V,Elect.
C885-C888	370132214	220pF $\pm$ 5%,100V,APS	C501,C502	354781009	10 $\mu$ F,50V,Elect.
C891-C894	353741009	10 $\mu$ F,16V,Elect.	C503,C504	374724714	470pF $\pm$ 5%,50V,Plastic
<b>Resistor</b>					
R1705	49163103413	10k $\times$ 13 RM1/101J, Array	C507,C508	354742219	220 $\mu$ F,16V,Elect.
<b>Push switches</b>					
S701	25035652	NPS-111-S604 <D/W>	C511,C512	374722224	2200pF $\pm$ 5%,50V,Plastic
S702-S706	25035652	NPS-111-S604	C513,C514	354721019	100 $\mu$ F,6.3V,Elect.
S709-S715	25035652	NPS-111-S604	C519-C522	354700109	1 $\mu$ F,160V,Elect.
S717-S729	25035652	NPS-111-S604	C601,C602	354781009	10 $\mu$ F,50V,Elect.
S730-S732	25035652	NPS-111-S604 <P>	C607,C608	354742219	220 $\mu$ F,16V,Elect.
S733-S748	25035652	NPS-111-S604	C613,C614	354721019	100 $\mu$ F,6.3V,Elect.
S961	25035653	▲ NPS-122-L605 <P>	C619-C622	354700109	1 $\mu$ F,160V,Elect.
<b>Holder</b>					
Q1701a	27190913Y		R450	5104348AY or 5104349AY	N16RQL50KA25F, Variable
<b>Wire holders</b>					
JL701b	25050946	NSCT-40P733	R527,R528	443522204	22 Ohm $\pm$ 5%,1/2W,Metal oxide
JL801b	25051087	NSCT-3P874	R529,R530	443528204	82 Ohm $\pm$ 5%,1/2W,Metal oxide
<b>MASTER VOLUME CIRCUIT PC BOARD (NAAF-5771-1A/1B/1C)</b>					
CIRCUIT NO.	PART NO.	DESCRIPTION			
<b>ICs</b>					
Q451,Q461	22240293 or	NJM4558L-D or	R531-R534	453530224	2.2 Ohm $\pm$ 5%,1/2W,Metal
Q471,Q472	22240247	BA15218N	R627,R628	443522204	22 Ohm $\pm$ 5%,1/2W,Metal oxide
Q473	22240266	TC9213P	R629,R630	443528204	82 Ohm $\pm$ 5%,1/2W,Metal oxide
Q474	22240799	TC9163AN	R631-R634	453530224	2.2 Ohm $\pm$ 5%,1/2W,Metal
<b>Transistors</b>					
Q481-Q484	2213631 or 2213632	RN1241-A or RN1241-B	<b>Sockets</b>		
Q491,Q492	2213510 or 2214350	DTA114ES or RN2202	P601	25050985	NSCT-12P772
Q501-Q504	2211732 or	* 2SC1845-F or	P602	25050988	NSCT-18P775
Q601-Q604	2211733	* 2SC1845-E	P603	25050986	NSCT-14P773
Q505,Q506	2213354 or	2SA933S-R or	<b>HEADPHONE TERMINAL PC BOARD (NAETC-5772-1A/1B/1D/1E/1F)</b>		
Q605,Q606	2212125	2SA1048-GR	CIRCUIT NO.	PART NO.	DESCRIPTION
Q507,Q508	2211732 or	2SC1845-F or	JL801b	25051087	NSCT-3P874,Wire holder
Q607,Q608	2211733	2SC1845-E	P801	25045257	YKB26-5138,Headphone jack
Q509,Q510	2213284 or	2SC1740S-R or	<b>PRIMARY CIRCUIT PC BOARD (NAPS-5773-1A/1B/1C/1E/1F)</b>		
Q609,Q610	2212115	2SC2458-GR	CIRCUIT NO.	PART NO.	DESCRIPTION
Q511,Q512	2211353 or	2SA949-O or	<b>Transistor</b>		
Q611,Q612	2211354	2SA949-Y	Q951	2213284 or 2212115	2SC1740S-R or 2SC2458-GR
Q513,Q514	2211633 or	2SC2229-O or	<b>Diodes</b>		
Q613,Q614	2211634	2SC2229-Y	D951-D954	22380046 or 22380035	AM01Z or GP104003E
<b>Diodes</b>					
D491,D492	223205,	1SS270A,	D955-D957	223205, 223163 or 223222	1SS270A, 1SS133 or WG713A
D501,D502	223163 or	1SS133 or	<b>Power transformer</b>		
D601,D602	223222	WG713A	T901	2300670AY 2300671AY 2300672Y	▲ NPT-1111D <D> ▲ NPT-1111P <P> ▲ NPT-1111DG <W>
<b>Capacitors</b>					
C901	3500191	▲ DE7150FZ103M,IS	C952	354742219	220 $\mu$ F,16V,Elect.

**CAUTION:** Replacement of the transistor of mark  $\Delta$ , if necessary, must be made from the same beta group (Hrx) as the original type.

**NOTE:** THE COMPONENTS IDENTIFIED BY MARK  $\Delta$  ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Resistors</b>	
R901	431523355	$\Delta$ 3.3 Mohm, 1/2W, Solid <D>
R951	453530824	8.2 Ohm $\pm 5\%$ , 1/2W, Metal
	<b>Plug</b>	
P901a	25055675	NPLG-2P631 <D/P>
	<b>Relay</b>	
RL901	25065248 or	$\Delta$ NRL-1P15A-DC12-29 or
	25065516	$\Delta$ NRL-1P10A-DC12-097 <D/W>
	25065515 or	$\Delta$ NRL-1P5A-DC12-096 or
	25065508	$\Delta$ NRL-1P10A-DC12-093 <P>
	<b>AC outlet</b>	
P902	25051124	$\Delta$ NSCT-6P911 <D>
P903	25051125	$\Delta$ NSCT-4P912 <P/W>
	<b>Fuseholders</b>	
F901a	25050065	$\Delta$ YSH403T <D/W>
F902a	25050065	$\Delta$ YSH403T <P/W>
F903a	25050065	$\Delta$ YSH403T <P>
	<b>Fuse</b>	
F901	252166Y	$\Delta$ 6.3A-UL/T-237, Primary <D/W>
F902	252076	$\Delta$ 3.15A-SE-EAK, Primary <P/W>
F903	252075	$\Delta$ 2.5A-SE-EAK, AC outlet <P>
	<b>Wire holder</b>	
JL961a	25051089	NSCT-5P876
CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Switch</b>	
S901	25065437	$\Delta$ NSS-22157P, Voltage selector <W>

**VIDEO CIRCUIT PC BOARD (NAETC-5775-1A/1B/1C/1E/1F)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>ICs</b>	
Q251	22240373	BA7625
Q259	22240293 or	NJM4558L-D or
	22240247	BA15218N
Q271	22240968	LC74763-9147
	<b>Transistors</b>	
Q252-Q254	2213354 or	2SA933S-R or
Q273	2212125	2SA1048-GR
Q255	2213510 or	DTA114ES or
	2214350	RN2202
Q256	2212285 or	2SC2878-A or
	2212286	2SC2878-B
Q257	2213640 or	DTC123JS or
	2214660	RN1205
Q258	2213830 or	DTB113ZS or
	2214690	RN2226
Q260, Q261	2213284 or	2SC1740S-R or
	2212115	2SC2458-GR
Q272	2213284 or	2SC1740S-R or
	2212115	2SC2458-GR
	<b>Diodes</b>	
D251	224471203	MTZJ12C
D252-D255	223205,	1SS270A,
D271	223163 or	1SS133 or
	223222	WG713A
	<b>Coils</b>	
L271	233454K056	NCH-1452 056K
L272	233454K220	NCH-1452 220K

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Resonator</b>	
X271	3010167	XTL-14.32M, Crystal
X272	3010238	XTL-17.73M <P/W>
	<b>Capacitors</b>	
C251-C254	354780229	2.2 $\mu$ F, 50V, Elect.
C255-C257	354724719	470 $\mu$ F, 6.3V, Elect.
C258	354741009	10 $\mu$ F, 16V, Elect.
C259	354721019	100 $\mu$ F, 6.3V, Elect.
C261	354721029	1000 $\mu$ F, 6.3V, Elect.
C264, C266	354741009	10 $\mu$ F, 16V, Elect.
C268, C269	354741009	10 $\mu$ F, 16V, Elect.
C271	354784799	0.47 $\mu$ F, 50V, Elect.
C274	375522234	0.022 $\mu$ F $\pm 5\%$ , 50V, Plastic
C275	354780109	1 $\mu$ F, 50V, Elect.
C276	374726824	6800pF $\pm 5\%$ , 50V, Plastic
C277	354783399	0.33 $\mu$ F, 50V, Elect.
C278	374721224	1200pF $\pm 5\%$ , 50V, Plastic
C279	354741009	10 $\mu$ F, 16V, Elect.
C281, C288	354721019	100 $\mu$ F, 6.3V, Elect.
C294	354780109	1 $\mu$ F, 50V, Elect.
C296	354721019	100 $\mu$ F, 6.3V, Elect.
	<b>Switch</b>	
S251	25065286	NSS-22112
	<b>Terminals</b>	
P251	25045339	NPJ-4PDYE190
P252	25045395	NPJ-2PDYE221
	<b>Plug</b>	
P261a	25055132	NPLG-2P116
	<b>Wire trap</b>	
JL251b	25055632	NPLG-11P594

**SPEAKER TERMINAL PC BOARD (NAETC-5776-1A/1B/1C/1E/1F)**

CIRCUIT NO.	PART NO.	DESCRIPTION
P503	25060244 or	NTM8PDMN164 or
	25060125	NTM8PDMN058, Speaker terminal
JL501b	25050268	NSCT-4P96, Wire trap

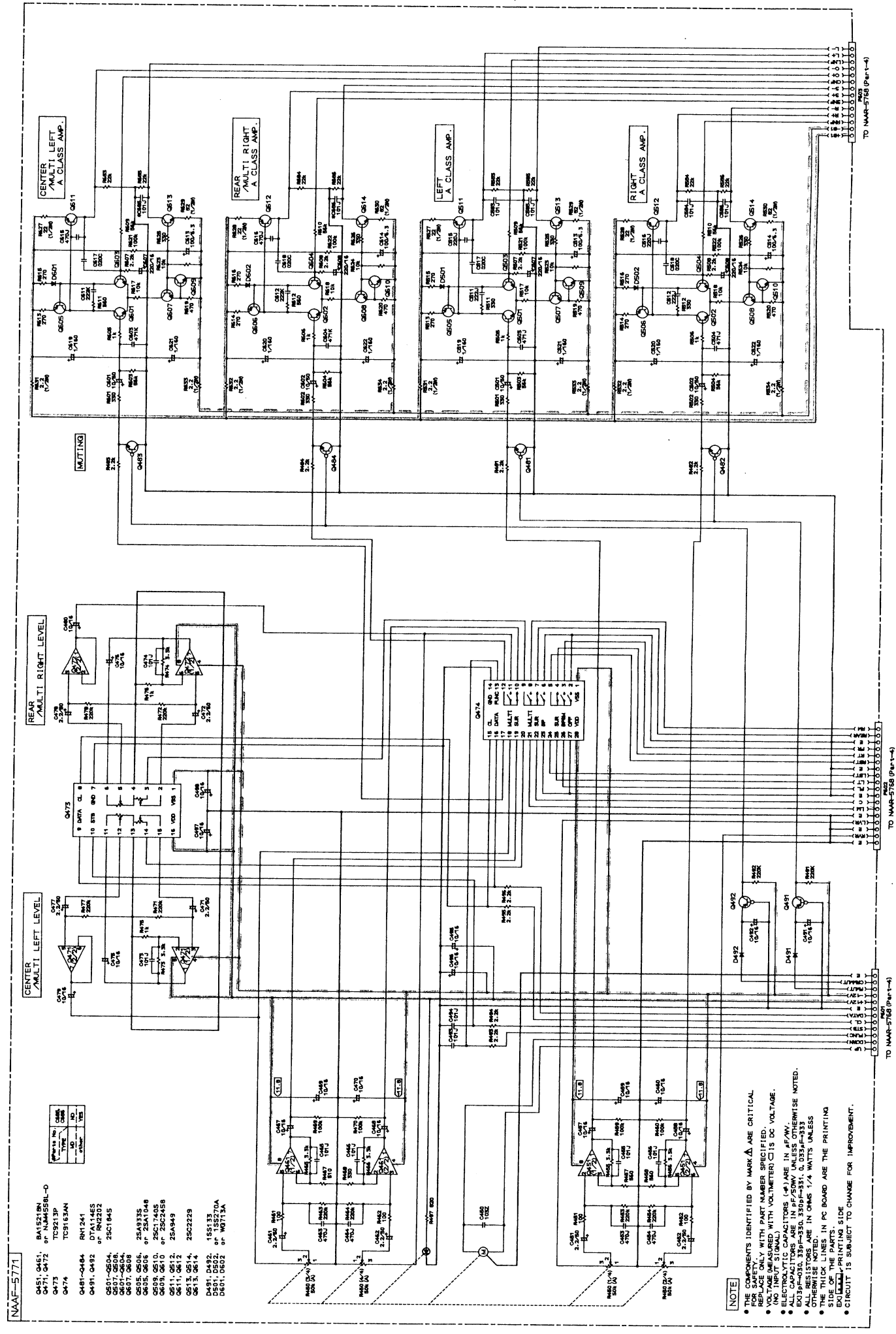
**TONE CONTROL CIRCUIT PC BOARD (NAAF-5777-1A/1B/1C/1E/1F)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>ICs</b>	
Q401, Q402	22240293 or	NJM4558L-D or
	22240247	BA15218N
	<b>Transistors</b>	
Q403-Q406	2211945	2SK246-GR
Q407	2213510 or	DTA114ES or
	2214350	RN2202
	<b>Diodes</b>	
D401-D404	223205,	1SS270A,
	223163 or	1SS133 or
	223222	WG713A
	<b>Resistors</b>	
R393	5104225 or	N11RGLC250KW22Z or
	5104378Y	N11RGLC250KWT22Z, Variable
R407, R413	5104230 or	N14RLC100KWT22Z, Variable
	5104377	



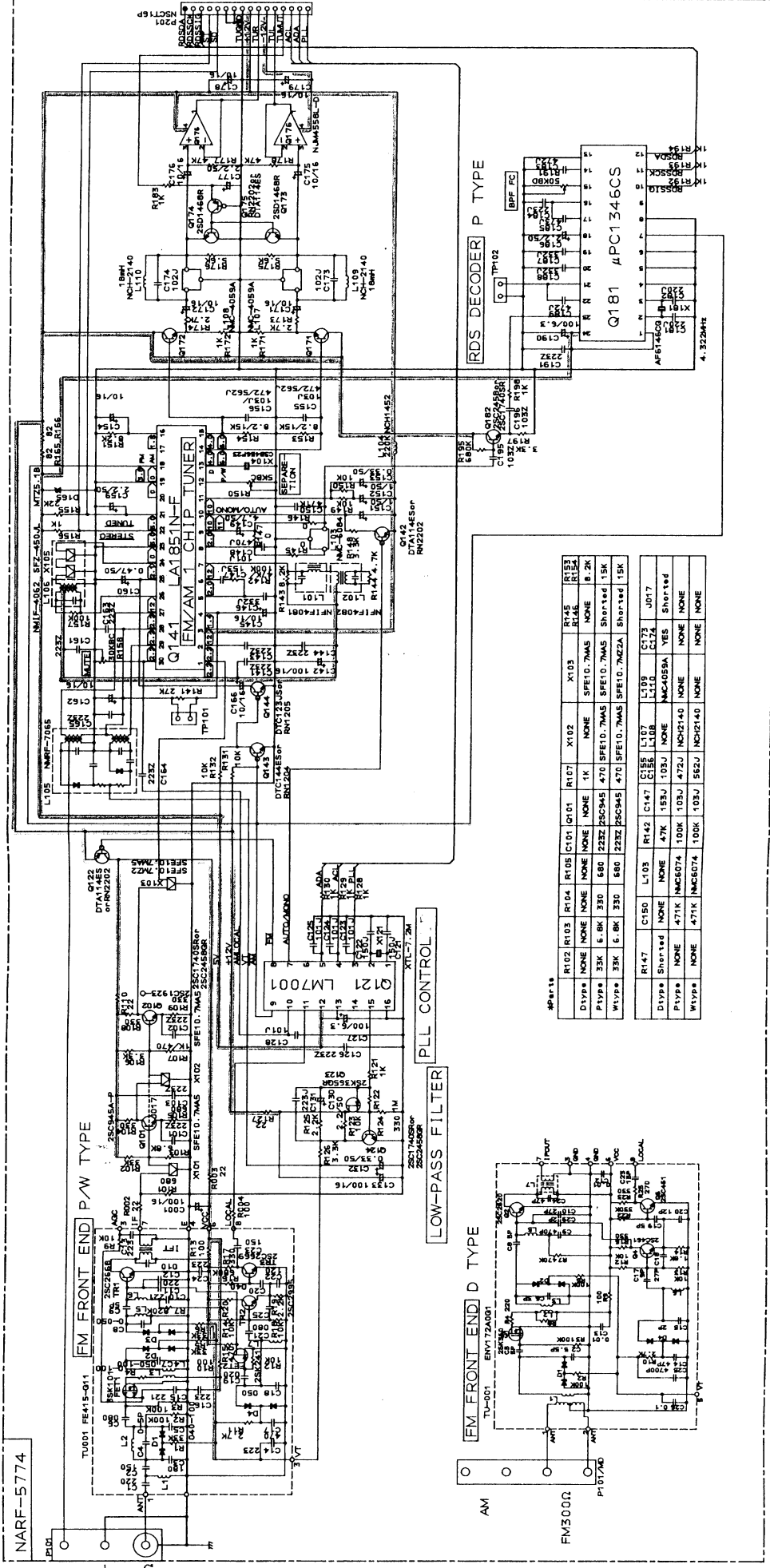
A B C D E F G

SCHEMATIC DIAGRAM 5/6



SCHEMATIC DIAGRAM 6/6

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TABLE 1

R102	R103	R104	R105	C101	Q101	Q102	X103	R146	R147	R148
NONE	NONE	NONE	NONE	NONE	NONE	NONE	SFE10.7M45	NONE	NONE	NONE
D159a	33K	5.6K	330	580	222Z	25C945	470	SFE10.7M45	SFE10.7M45	Shorted
W159a	33K	5.6K	330	580	222Z	25C945	470	SFE10.7M45	SFE10.7M45	Shorted

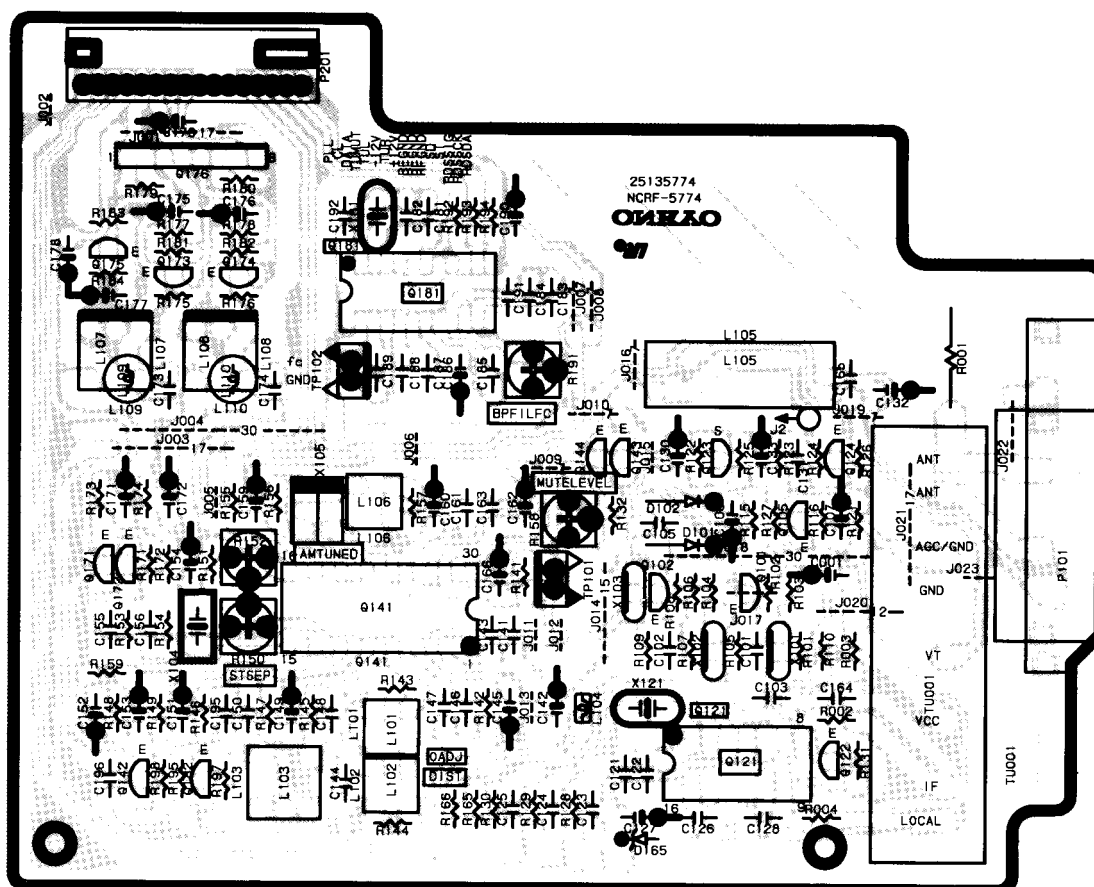
TABLE 2

R147	C150	L103	R142	C147	C148	L108	L110	J077
Shorted	NONE	47K	155J	103J	NONE	NONE	NONE	Shorted
P159a	NONE	471K	NAC8074	100K	103J	472J	NCH2140	NONE
W159a	NONE	471K	NAC8074	100K	103J	562J	NCH2140	NONE

# PRINTED CIRCUIT BOARD-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION	TUNER CIRCUIT PC BOARD (NARF-5774-1A/1B/1C/1E/1F)		
CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
JL401a	25051093	NSCT-9P880	TU001	240098Y	ENV172D1G1 <D>
	<b>Wire holder</b>			240089	FE415-G11 <P/W>
C401,C402	354741009	10 $\mu$ F,16V,Elect.		<b>ICs</b>	
C405,C406	354744709	47 $\mu$ F,16V,Elect.	Q121	22240090	LM7001
C407,C408	374721534	0.015 $\mu$ F $\pm$ 5%,50V,Plastic	Q141	22240983Y	LA1851N-F
C411,C412	374721534	0.015 $\mu$ F $\pm$ 5%,50V,Plastic	Q176	22240293 or	NJM4558L-D or
C413-C416	374721044	0.1 $\mu$ F $\pm$ 5%,50V,Plastic		22240247	BA15218N
C417-C420	374721024	1000pF $\pm$ 5%,50V,Plastic	Q181	22240679	$\mu$ PC1346CS <P>
<b>FRONT TERMINAL PC BOARD (NAETC-5778-1A/1B/1C/1E/1F)</b>				<b>Transistors</b>	
CIRCUIT NO.	PART NO.	DESCRIPTION	Q101	2210746	2SC945A-P <P/W>
P261	2009990281	NSAS-4P0409,Socket	Q102	2211723	2SC1923-O
P305	25045402	NPJ-3PDBL227,Terminal	Q122,Q142	2213510 or	DTA114ES or
P321	2009990125	NSAS-6P0190,Socket	Q175	2214350	RN2202
<b>PRE. OUTPUT TERMINAL PC BOARD (NAETC-5779-1A/1B/1C/1E/1F)</b>			Q123	2212445	2SK365-GR
CIRCUIT NO.	PART NO.	DESCRIPTION	Q124	2213284 or	2SC1740S-R or
P431	25045458 or	NPJ-6PDBL279 or	Q171,Q172	2212115	2SC2458-GR
	25045300	NPJ-6PDBL159,Terminal	Q143	221282 or	DTC144ES or
P432	25045456 or	NPJ-2PDBL277 or		2213560	RN1204
	25045298	NPJ-2PDBL157,Terminal	Q144	2213640 or	DTC123JS or
JL502b	25055628	NPLG-7P590,Plug		2214660	RN1205
<b>MR/RI TERMINAL PC BOARD (NAETC-5780-1A/1B/1C/1E/1F)</b>			Q173,Q174	2212794	2SD1468-R
CIRCUIT NO.	PART NO.	DESCRIPTION	Q182	2213284 or	2SC1740S-R or
	<b>Transistors</b>			2212115	2SC2458-GR <P>
Q1761,Q1762	221282 or	DTC144ES or	D165	224470512	MTZJ5.1B
	2213560	RN1204		<b>Diode</b>	
Q1763	221282 or	DTC144ES or	L101	233457Y	NFIF-4081
	2213560	RN1204 <D>	L102	233458Y	NFIF-4082
Q1764	2213510 or	DTA114ES or	L106	232139	NMIF-4062
	2214350	RN2202 <D>		<b>Coils</b>	
	<b>Photo coupler</b>		L103	233471Y	NMC-6084 <P/W>
Q1765	24120043	ON3131 <D>	L104	233454K220	NCH-1452 220K
	<b>Diodes</b>		L107,L108	233355A	NMC-4059 <P/W>
D1761,D1763	223205,	1SS270A,	L109,L110	231092	NCH-2140 <D>
	223163 or	1SS133 or		<b>RF block</b>	
	223222	WG713A	L105	232163A	NMRF-7065
D1762	223205,	1SS270A,		<b>Resonators</b>	
	223163 or	1SS133 or	X104	3010268Y	CSB456F23,Ceramic
	223222	WG713A <D>	X121	3010141	XTL-7.2M,Crystal
D1764	223205,	1SS270A,	X181	3010203	AF6146CG <P>
	223163 or	1SS133 or		<b>Ceramic filters</b>	
	223222	WG713A <P/W>	X101	3010071	SFE10.7MA5
	<b>Capacitors</b>		X102	3010071	SFE10.7MA5 <P/W>
C1761	354721019	100 $\mu$ F,6.3V,Elect.	X103	3010071	SFE10.7MA5 <D>
C1762	374724724	4700pF $\pm$ 5%,50V,Plastic		3010130	SFE10.7MZ2A <P/W>
	<b>Terminals</b>		X105	3010123	SFZ450JL
P1761	25045172	HSJ-1003-01-020,RI	C001	354741019	100 $\mu$ F,16V,Elect.
P1762	25045433	HSJ-1003-01-013,XANTECH <D>	C127	354721019	100 $\mu$ F,6.3V,Elect.
	25045293	HSJ-1003-01-012,MR <P/W>	C130	354780229	2.2 $\mu$ F,50V,Elect.
	<b>Wire trap</b>		C131	374722234	0.022 $\mu$ F $\pm$ 5%,50V,Plastic
JL702b	25055630	NPLG-9P592	C132	354783399	0.33 $\mu$ F,50V,Elect.
	<b>Wire holder</b>		C133,C142	354741019	100 $\mu$ F,16V,Elect.
JL961b	25051089	NSCT-5P876	C145	354741009	10 $\mu$ F,16V,Elect.
	<b>Switch</b>		C146	374723324	3300pF $\pm$ 5%,50V,Plastic
S1761	25065286	NSS-22112, Band step <W>	C147	374721534	0.015 $\mu$ F $\pm$ 5%,50V,Plastic <D>
				374721034	0.01 $\mu$ F $\pm$ 5%,50V,Plastic <P/W>

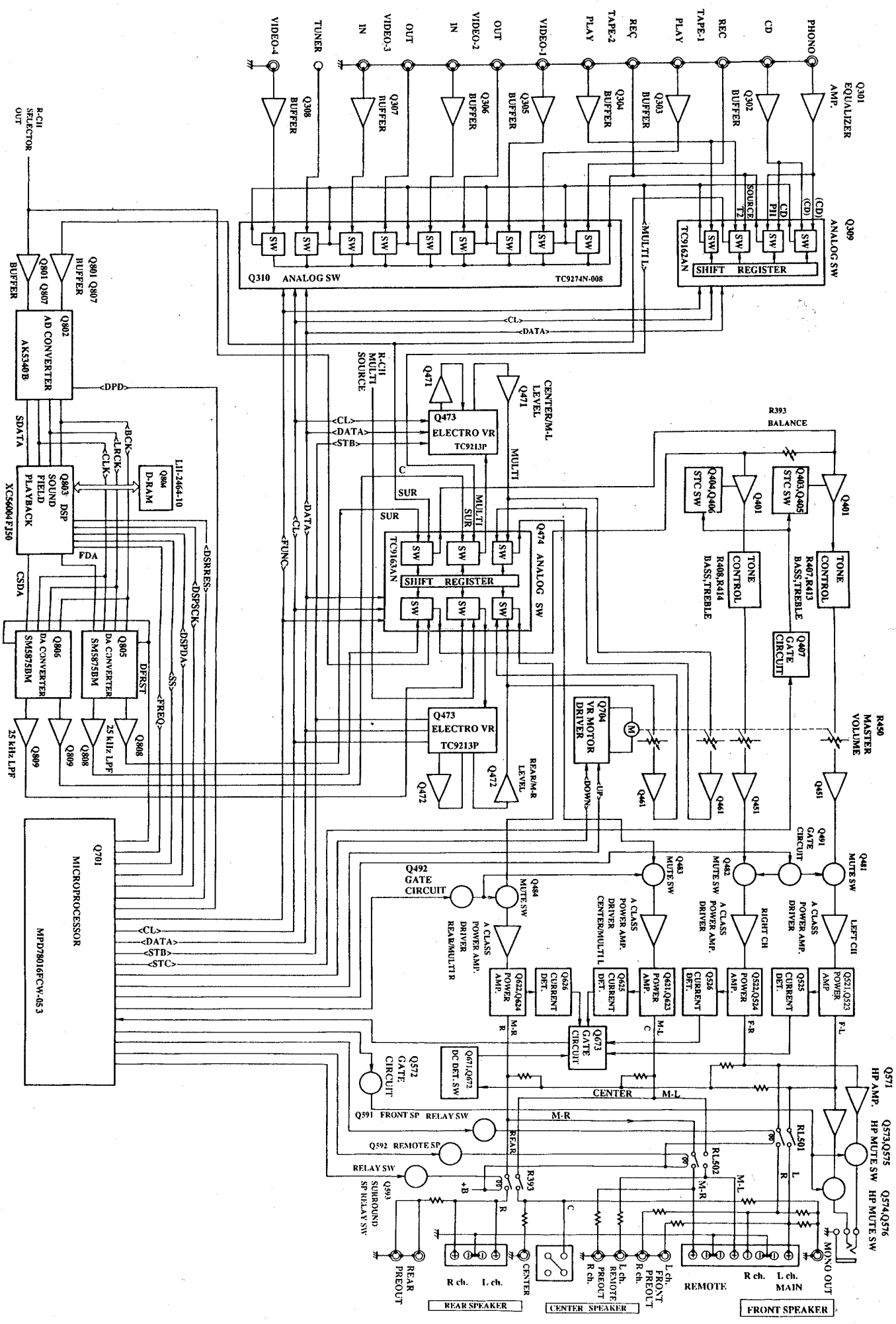
## PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE



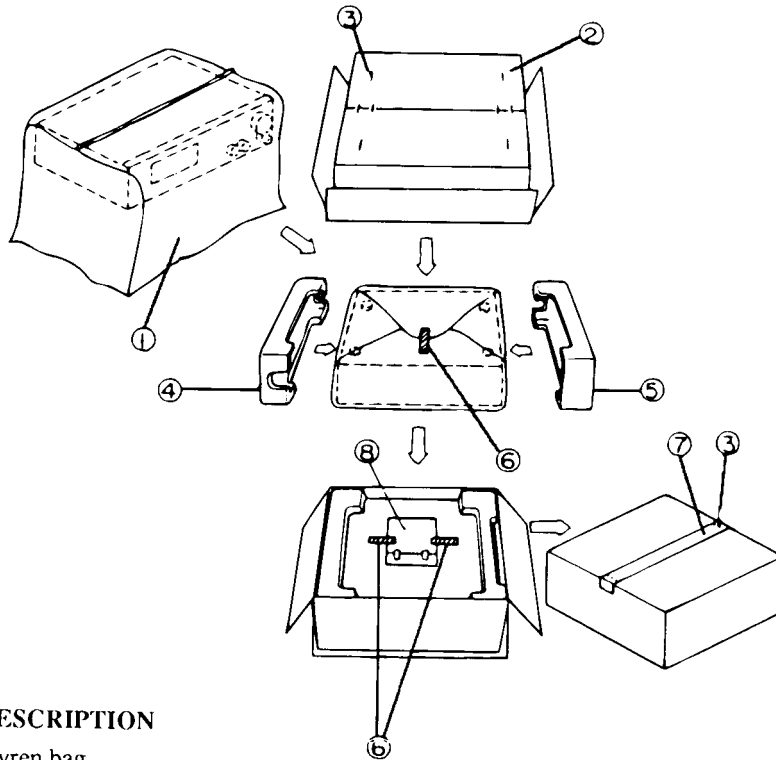
TUNER CIRCUIT PC BOARD

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors			Resistors	
C149	354780479	4.7 $\mu$ F,50V,Elect.	R150	5210261	N06HR5KBC, Trimming
C151,C152	354780109	1 $\mu$ F,50V,Elect.	R158	5210264	N06HR30KBC, Trimming
C153	354783399	0.33 $\mu$ F,50V,Elect.	R191	5210265	N06HR50KBC, Trimming <P>
C154	354741009	10 $\mu$ F,16V,Elect.		Terminal	
C155,C156	374721034	0.01 $\mu$ F $\pm$ 5%,50V,Plastic <D>	P101	25060160 or	NTM-4PDML086 or
	374724724	4700pF $\pm$ 5%,50V,Plastic <P>		25060225	NTM-4PDML147, Antenna <D>
	374725624	5600pF $\pm$ 5%,50V,Plastic <W>		25060117 or	NTM-2PDMN051 or
C159	354780229	2.2 $\mu$ F,50V,Elect.		25060222	NTM-2PDML144, Antenna <P/W>
C160	354784799	0.47 $\mu$ F,50V,Elect.		Socket	
C162,C166	354741009	10 $\mu$ F,16V,Elect.	P201	25050986	NSCT-14P773 <D/W>
C171,C172	354741009	10 $\mu$ F,16V,Elect.		25050987	NSCT-16P774 <P>
C173,C174	374721024	1000pF $\pm$ 5%,50V,Plastic <D>		Plugs	
C175,C176	354741009	10 $\mu$ F,16V,Elect.	TP101	25055038	NPLG-2P29
C177	354780229	2.2 $\mu$ F,50V,Elect.	TP102	25055038	NPLG-2P29 <P>
C178,C179	354741009	10 $\mu$ F,16V,Elect.			
C183,C189	374724724	4700pF $\pm$ 5%,50V,Plastic <P>			
C184	374722234	0.022 $\mu$ F $\pm$ 5%,50V,Plastic <P>			
C185	374724734	0.047 $\mu$ F $\pm$ 5%,50V,Plastic <P>			
C186	354780229	2.2 $\mu$ F,50V,Elect. <P>			
C187,C188	374723324	3300pF $\pm$ 5%,50V,Plastic <P>			
C190	354721019	100 $\mu$ F,6.3V,Elect. <P>			

# BLOCK DIAGRAM



# PACKING VIEW



REF.NO.	PART NO.	DESCRIPTION
1	29100034-1AY	Styren bag
2	29053018Y	Carton box <D/X>
	29053069Y	Carton box <W>
	29053019Y	Carton box <P>
3	282301	Staple
4	29091733AY	Pad R
5	29091732AY	Pad L
6	261504	Paper tape
7	29110071	PP tape
8	Accessory bag ass'y	
	29100097-1AY	Styren bag
	24140036	RC-P101S, Remote control transmitter <D>
	24140037	RC-P201S, Remote control transmitter <P/W>
	3010054	UM-3, Battery
	232140	NMA-3057, AM loop antenna
	292111	FM antenna <D>
	292112	FM antenna <P/W>
	29342315AY	Instruction manual
	29342316Y	Instruction manual <P>
	29342317Y	Instruction manual <P>
	29342318Y	Instruction manual <C/W>
	29342353Y	Instruction manual, remote control
	2010200	Cord RI
	29365019B	Warranty card <N>
	29365021	Warranty card <X>

## NOTES

The TX-SV636(B)MPT type (Taiwanese model) is the same as the TX-SV636(B)MP type (230V model) with the exception of the following sections.

REF.NO.	PART NAME	MPT type		MP type	
		PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
U1	Main circuit pcb ass'y	1A651568-1EY	NAAR-5768-1E	1A651568-1BY	NAAR-5768-1B
U2	Secondary circuit pcb ass'y	1A651569-1EY	NAETC-5769-1E	1A651569-1BY	NAETC-5769-1B
U4	Display circuit pcb ass'y	1A651570-1CY	NADG-5770-1C	1A651570-1BY	NADG-5770-1B
U5	Master volume circuit pcb ass'y	1A651571-1CY	NAAF-5771-1C	1A651571-1BY	NAAF-5771-1B
U6	Headphone terminal pcb ass'y	1A651572-1EY	NAETC-5772-1E	1A651572-1BY	NAETC-5772-1B
U7	Primary circuit pcb ass'y	1A651573-1EY	NAPS-5773-1E	1A651573-1BY	NAPS-5773-1B
U8	Tuner circuit pcb ass'y	1A651574-1EY	NARF-5774-1E	1A651574-1BY	NARF-5774-1B
U10	Video circuit pcb ass'y	1A651575-1EY	NAETC-5775-1E	1A651575-1BY	NAETC-5775-1B
U12	Speaker terminal pcb ass'y	1A651576-1EY	NAETC-5776-1E	1A651576-1BY	NAETC-5776-1B
U14	Tone control circuit pcb ass'y	1A651577-1EY	NAAF-5777-1E	1A651577-1BY	NAAF-5777-1B
U15	Front terminal pcb ass'y	1A651578-1EY	NAETC-5778-1E	1A651578-1BY	NAETC-5778-1B
U16	Pre. output terminal pcb ass'y	1A651579-1EY	NAETC-5779-1E	1A651579-1BY	NAETC-5779-1B
U17	MR/RI terminal pcb ass'y	1A651580-1EY	NAETC-5780-1E	1A651580-1BY	NAETC-5780-1B
U18	Transformer terminal pcb ass'y	1A651581-1EY	NAETC-5781-1E	1A651581-1BY	NAETC-5781-1B
	Instruction manual	29342318Y	FST	29342316Y	GFI
	Instruction manual	Not used		29342317Y	SDSW
	FM antenna adaptor	25065462		Not used	
	Rear panel	27122227Y		27122226Y	
	Knob,power	Not uscd		28325306Y	
	Decorative frame	27215253AY		27215256AY	
	Front panel ass'y	1A651121Y		1A704121Y	
	Carton box	29053069Y		29053019Y	

The TX-SV636(B)MGK type (Korean model) is the same as the TX-SV636(B)MP type (230V model) with the exception of the following sections.

REF.NO.	PART NAME	MGK type		MP type	
		PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
U1	Main circuit pcb ass'y	1A651568-1FY	NAAR-5768-1F	1A651568-1BY	NAAR-5768-1B
U2	Secondary circuit pcb ass'y	1A651569-1FY	NAETC-5769-1F	1A651569-1BY	NAETC-5769-1B
U4	Display circuit pcb ass'y	1A651570-1CY	NADG-5770-1C	1A651570-1BY	NADG-5770-1B
U5	Master volume circuit pcb ass'y	1A651571-1CY	NAAF-5771-1C	1A651571-1BY	NAAF-5771-1B
U6	Headphone terminal pcb ass'y	1A651572-1FY	NAETC-5772-1F	1A651572-1BY	NAETC-5772-1B
U7	Primary circuit pcb ass'y	1A651573-1FY	NAPS-5773-1F	1A651573-1BY	NAPS-5773-1B
U8	Tuner circuit pcb ass'y	1A651574-1FY	NARF-5774-1F	1A651574-1BY	NARF-5774-1B
U10	Video circuit pcb ass'y	1A651575-1FY	NAETC-5775-1F	1A651575-1BY	NAETC-5775-1B
U12	Speaker terminal pcb ass'y	1A651576-1FY	NAETC-5776-1F	1A651576-1BY	NAETC-5776-1B
U14	Tone control circuit pcb ass'y	1A651577-1FY	NAAF-5777-1F	1A651577-1BY	NAAF-5777-1B
U15	Front terminal pcb ass'y	1A651578-1FY	NAETC-5778-1F	1A651578-1BY	NAETC-5778-1B
U16	Pre. output terminal pcb ass'y	1A651579-1FY	NAETC-5779-1F	1A651579-1BY	NAETC-5779-1B
U17	MR/RI terminal pcb ass'y	1A651580-1FY	NAETC-5780-1F	1A651580-1BY	NAETC-5780-1B
U18	Transformer terminal pcb ass'y	1A651581-1FY	NAETC-5781-1F	1A651581-1BY	NAETC-5781-1B
T901	Power transformer	2301073Y	NPT-1230DG	2301072Y	NPT-1230P
P901	Power supply cord	253213WSE	KS-AS	253193HIT	AS-CEE
P903	Fuse	Not used		252075	2.5A-SE-EAK
P904,P905	AC outlet	25051266	NSCT-2P1056	Not used	
	Instruction manual	Not used		29342316Y	GFI
	Instruction manual	Not used		29342317Y	SDSW
	FM antenna adaptor	25065462		Not used	
	Rear panel	27122259Y		27122226Y	
	Knob,power	Not used		28325306Y	
	Decorative frame	27215253AY		27215256AY	
	Front panel ass'y	1A651121Y		1A704121Y	
	Carton box	29053069Y		29053019Y	

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